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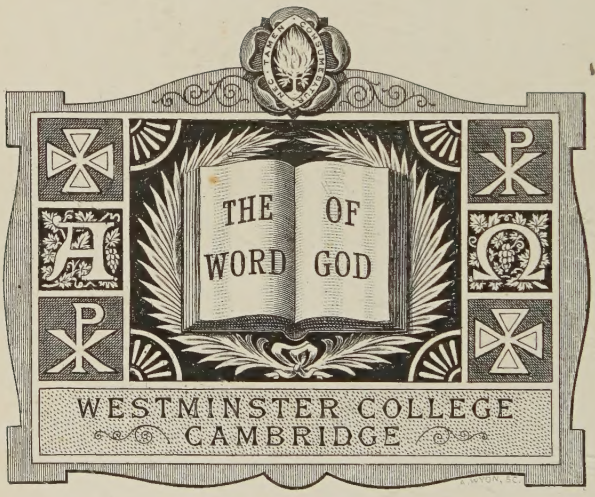

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Palestine Exploration quarterly

PALESTINE EXPLORATION FUND.

Patron—THE QUEEN.

Quarterly Statement

FOR 1897.

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INDEX

TO

NAMES OF THE AUTHORS AND OF THE PAPERS CONTRIBUTED BY THEM.

	PAGE
Bailey, Dr. Henry J.—	
The Quality of the Water in Jacob's Well	67
The Water of Jacob's Well	196
Baldensperger, P. J., Esq.—	
Morals of the Fellahîn (Answers to Questions)	123
Birch, Rev. W. F., M.A.—	
Topheth and the King's Garden	72
Bliss, F. J., Ph.D.—	
Eleventh Report on the Excavations at Jerusalem	11
Twelfth „ „ „	91
Thirteenth „ „ „	173
Fourteenth „ „ „	260
Brown, William, Esq.—	
Construction of the Tabernacle	154
Chaplin, Thomas, M.D.—	
The Visit of David the Reubenite to Hebron and Jerusalem, A.D. 1523	44
Conder, Lieut.-Colonel C. R., D.C.L., LL.D., M.R.A.S., R.E.—	
Libnah	69
Mediæval Topography of Palestine	70
Notes on the *Quarterly Statement*	83
Remarks on Masonry	145
Date of the Siloam Text	204
Note on Pierre Belon's Travels	208
I. Notes on the April *Quarterly Statement*	211
II. The Swastica or Fylfot	212
Dalton, Rev. Canon—	
Note on the Hebron Haram	53

PAGE

Dickie, Archibald C., A.R.I.B.A.—
Architectural Notes on Remains of Ancient Church at Pool of Siloam 26
Stone-Dressing of Jerusalem, Past and Present 61
The Great Mosque of the Omeiyades, Damascus 268

Drinkwater, Rev. C. H., Vicar of St. George's, Shrewsbury—
Palestine Pilgrim's Certificate 81

Forbes, M.—
"Areos," "Arisu," or "Aarsu" of the "Harris Papyrus," "Aaron" of Exodus 226

Ganneau, Clermont- M., LL.D., Membre de l'Institut, Professeur au Collège de France—
Notes on the *Quarterly Statement* 84
The Mâdeba Mosaic.. 213
Notes on the Seal found on Ophel, &c. 304

Glaisher, James, Esq., F.R.S.—
Results of Meteorological Observations at Jerusalem, 1894 .. 156
„ „ „ „ 1895 .. 235
„ „ „ Tiberias, 1894 .. 160
„ „ „ „ 1895 .. 231

Golubowich, Padre Girolamo, O.S.F.—
Discovery of an Important Cufic Inscription near the Church of the Holy Sepulchre, Jerusalem 302

Hanauer, Rev. J. E.—
Remarkable Sculpture at Mejdel 33
Removal of the Portal of a Church at Acre to Cairo 304

Hill, Gray, Esq.—
A Journey to Petra, 1896 .. .. 35, 134

Lethaby, W. R., Esq.—
The Temple, the Church of the Ascension, and the Finding of the Cross 75

Masterman, Dr. E. W. G.—
Notes from Damascus 147
Superstitious Custom connected with the Building-up of a Door 148
The Water of Jacob's Well 149
The Damascus Railways 198

Murray, Dr.—
Note on Greek Inscription from near Nazareth 189

Pilcher, E. J., Esq.—
Note on the Ophel Signet 309

Porter, Rev. H., of the Syrian Protestant College, Beirût—
A Greek Inscription from near Nazareth.. 188
„ „ at Beirût 303

PAGE

Sayce, Professor A. H.—
Notes on the Seal found on Ophel 181, 310

Schick, Dr. Conrad—
Khan ez Zeit.. 29
Reports and Papers.. 103
I. The Kubbet "Shekfee Sakhra," also called the "Little Sakhra," in the Haram es Sherif, Jerusalem 103
II. Newly-Discovered Rock Block with Tombs 105
III. The West Wall of the Pool of Hezekiah 107
IV. The Church at the Pool of Siloah 109
V. The Stone Hat-Toîm 113
VI. The Site of the Ascension of Our Lord 114
VII. Bethphage and Bethany 117
VIII. Jeshimon of the Bible 119
IX. (1) A Remarkable Stone in the Jewish Quarter, Jerusalem, 120; (2) Jeremiah's Grotto Hill, 121; (3) Kedron Valley, 122; (4) Siloah Spring, 122.
The (so-called) Tombs of the Kings at Jerusalem 182

Schumacher, Dr. G.—
Notes from Jedûr 190

Simpson, James, Esq.—
Where are the Sacred Vessels of the Temple? 77

Simpson, William, Esq.—
The Temple and the Mount of Olives 307

Spiers, R. Phenè, F.S.A.—
The Great Mosque of the Omeiyades, Damascus 282

St. Clair, Rev. George, F.G.S.—
The Valley Gate and the Dung Gate 69

Tristram, Rev. Canon—
Flora of Syria, Palestine, and Sinai (Dr. Post's) 151

Trumbull, Rev. Clay H., D.D.—
The Water of Jacob's Well 149

Watson, Colonel C. M., C.M.G., R.E.—
The Length of the Jewish Cubit 201

Wilson, Major-General Sir Charles, K.C.B., F.R.S., D.C.L., R.E., &c.—
Note on the Mosaic at Mâdeba 239
Extracts from Diary, 1865, on the Great Mosque of the Omeiyades, Damascus.. 299

Wright, Rev. Theodore F., Ph.D.—
The Swastica 153
The Tabernacle Roof 225

LIST OF ILLUSTRATIONS.

	PAGE
Plan to illustrate Dr. Bliss's Eleventh Report of the Excavations of Jerusalem	11
Sections of Excavations at Pool of Siloam	14, 95
Church discovered at Pool of Siloam	18
Plan of Khan ez Zeit and Environs	30
Section of Khan ez Zeit	31
Capital of Pillar at Khan ez Zeit	32
Sketch of Sculptured Slab from Ascalon	33
Engraved Figures on Jewish Gravestones at Mogador	49
Plan of the Haram at Hebron	55
Stone-dressing Tools	62
Sigilum Guardiani Convent Montis Sion	82
Plan to illustrate Dr. Bliss's Twelfth Report of the Excavations of Jerusalem	91
Sections of Excavations at Siloam	95
Capital from the Byzantine Church found in the Excavations at the Pool of Siloam	10
Plan, Section, and Side View of the "Kubbet Shekfee Sakhra"	103
Plan and Sections of Rock Block, with Tombs, outside the Damascus Gate	106
Section and Sketch of West Wall of Pool of Hezekiah	108
The Stone "Hat-Toîm," Plan and Side View	113
Plan showing Ancient Roads crossing Mount Olivet, to illustrate Dr. Schick's Paper	116
A Remarkable Stone in the Jewish Quarter, Jerusalem	121
Tomb at Petra	135
Inscription on Stone at Petra	136
Petra, S.W. Valley	137
The Swastica	153, 212, 242
Inscription on the Tomb of St. Richard	168
Plan to Illustrate Dr. Bliss's Thirteenth Report of the Excavations of Jerusalem	173
Section across the Tyropœon Valley	178
Seal found on Ophel	181, 304, 309
Ground Plan of the Area of the (so-called) Tombs of the Kings	185
Greek Inscription from Nazareth	188, 189
Altar of Basalt and Greek Inscriptions from Jedûr	191, 194, 195
Table of Alphabets	205
Comparison of Letters	207

PAGE

Plan of Church at Mâdeba showing portion of Mosaic 214
The "Fylfot" or "Suastika" 242
Plates I, II, and III.—Excavations on Ophel 262, 264, 266
Plate I.—Plan of the Great Mosque of the Omeiyades, Damascus .. 268
Plates II, III, and IV.—Remains of Temple Enclosure 272, 274, 276
Plate V.—Section of the Ground Levels 279
Fig. 1. North and South Transepts and Crossing 285
,, 2. North Front of Mosque facing Court 286
,, 3. Section across the East Aisles, showing East Wall of Transept 287
,, 4. Section through Nave and Crossing 288
,, 5. The Mihrab and Mimbar at South End of Transept .. 289
,, 6. Arcade of Court and Minaret of the Bride 290
,, 7. The Minaret of Jesus 290
,, 8. View of the Mosque from the West, showing the North Front and Dome 291
,, 9. The Great Archway. A Portal of the Palace of Berid .. 297
Cufic Inscription found near the Church of the Holy Sepulchre, Jerusalem 302
Greek Inscription in the College Museum at Beirût 303
Portal of a Church at Acre now in Cairo 309

GENERAL INDEX.

Annual Meeting of the General Committee, 247.
Architectural Notes on Remains of Ancient Church at Pool of Siloam, 26.
"Areos," "Arisu," or "Aarsu" of the "Harris Papyrus," Aaron of Exodus, 226.
Ascension, Church of, the Temple, and the Finding of the Cross, 75.
Ascension of Our Lord, Site of the, 114.

Balance Sheet and Treasurer's Statement for 1896, 89.
Behâ ed Dîn's "Life of Saladin," 243.
Beirût and Damascus Railway, 200.
Bethphage and Bethany, 117.
Books, Donations of, 6, 87, 170, 171.

Cave of Machpelah, 4.
Church now being Erected on the Site of the Church of St. Stephen, 4.
Cubit, Jewish, Length of the, 201.
Cufic Inscription found near the Church of the Holy Sepulchre, 302.

Damascus, Notes from, 147.
Damascus and Hauran Railway, 198, 200.
Damascus, Great Mosque of the Omeiyades at, 168, 268, 282, 299.
David the Reubenite to Hebron and Jerusalem, Visit of, A.D. 1523, 44.

Fellahîn, Morals of the (Answers to Questions), 123.
Reputation, 123; Bravery, &c., 123; Punishment of Women, 125; Punishment of Men, 126; Punishment of Thieves, 127; Punishment of Murder, 128; Ordeal, 130; The Shiekh's Power, 131; Of Chastity, 132.
Finding of the Cross, Church of the Ascension, and the Temple, 75.
Firman, Termination of, 167.
Flora of Syria, Palestine, and Sinai, Dr. Post's, 169.
Fylfot or Swastica, 212, 242.

Greek Inscription from near Nazareth, 188.
Greek Inscription in the College Museum at Beirût, 303.

"Harris Papyrus," The, 226.
Hebron Haram, Notes on the, 4, 453.
Hebron and Jerusalem, Visit of David the Reubenite, A.D. 1523, 44.

Jacob's Well, Water of, 67, 149, 196.
Jedûr, Notes from, 190.
Abundance of Water and Pasture Fields, Tell and Kh. el Hârra, el-Kuneiyeh Station at, Fellahîn settled down among the Bedawîn, 190; Stones covered with Arabic Ornament and Inscriptions, Greek Inscription, 191; Fine View from el Hârra, 192, 193; Shekhab, Sarcophagi and Ornamented Building-Stones, Der el Adas, 193; Kefr es Shems, Some Important Ruins, Zimrîn, Water Basins, Ancient Remains, Crosses on the Building-Stones, Jasem, 194; Sa'sâ Jisr benât Y'akûb, Old Ruin of Nu'aran, Site again built up, Greek Inscriptions, Roman Ornaments and Coins found, 195.
Jericho, Hotel at, Open, 168.
JERUSALEM—
Akra, 32.
Constantine's Basilica, 32.
Crusading Tower, 102.
Dung Gate and the Valley Gate, 69.
Gate of the Valley (Nehemiah ii, 12, 13) probably Found, 3.
Market Place, 32.
Schick, Herr Baurath von, Honours to, 4.

Seal Found on Ophel, 181, 304, 309.
Stone-dressing of, Past and Present (Tools, &c.), 61–63.
Stone, Remarkable, in the Jewish Quarter, 120.
Tombs of the Kings (so-called), 182.
Valley Gate and the Dung Gate, 69.
From Dr. Schick's Reports—Khan ez Zeit, 29; The Kubbet Shekfee Sakhra or Little Sakhra, 103; Newly Discovered Rock Block with Tombs, 105; The West Wall of the Pool of Hezekiah, 107; The Church at the Pool of Siloah, 109; The Stone Hat-Toîm, 113; Jeremiah's Grotto Hill, 120; Kedron Valley, 122; Siloah Spring, 122.
Jerusalem, *Eleventh Report of Excavations at*, 11.
Built Stairway and Rock-hewn Steps, Ancient Limits of the Pool of Siloam, Church Found, Paved Road, Wall Crossing Tyropœon, 11; Blockage, Fragment of Wall 8 feet thick, Dressed Stones with Chisel-drafted Margins, Rock-hewn Chamber with Doorways, 12; Wall which Crosses the Tyropœon Valley below the Pool, Great Stairway West of the Pool, 13; Quadriporticum of the Bordeaux Pilgrim, 16; Church Immediately North of the Pool of Siloam, 17; Pavements of Atricum and Narthex, 19; Three Blocked-up Doorways, Apse and Choir, North Aisle, Marble Pavement, 20; Painted Pattern Found on the Plaster, Steps, Altar Stone, Sunk Box, 21; Photograph of Mosaic of the Nave, Antoninus Martyr Describes a Church over the Pool, 22, 23; Two Baths, 23; Architectural Notes on Remains of Ancient Church at Pool of Siloam, 26.
Jerusalem, *Twelfth Report*, 91.
Wall Crossing the Tyropœon below the Old Pool, 91; Signs of Two Distinct Periods, Wall Found at depth of 36 feet, 92; Wall Presumed to meet Warren's Ophel Wall, Probably a Tower, 95; Light Thrown on the Extent of the Old Pool, 98.
Jerusalem, *Thirteenth Report*, 173.
Paved Street and Drain in the Tyropœon, Relation to the Steps, &c., Leading to the Pool of Siloam, Paving Stones *in situ*, Flight of Steps, Street not used for Chariots, Kerb, *débris*, Paving Stones not *in situ*, Drain under Road, Western Kerb of Main Street, 173; Breadth at Junction, Difference of Jointing, Byzantine Church, Difference of Levels, Account of Antoninus Martyr, Atrium, Approach to the Pool, Drain Narrows to a Neck at the Point where the Pool Occurs, 174; Street Traced 125 feet further, Flight of Steps, Street Crosses Valley at an Angle, Branch Leading to the Pool, Relation of Bottom of Valley to Drain, Rock Forms Bed of Drain, Drain-bed Rests on *débris*, 175; Blockage, Chisel-drafted Margins, Cement known as Hamra, 176; City Wall in the Time of the Romans, References to Josephus on the Springs without the City, 177; Rock-hewn Dwellings, Wall, 30 feet high, Resting on Rock not a City Wall, 178; Form of Western Hill Determined and True Depth of Tyropœon Found, Further Searching for a Wall on the West Slope of Ophel, 179; Carnelian Seal with Hebrew Inscription, 180; Note on the Seal Found on Ophel, 181.
Jerusalem, *Fourteenth Report*, 260.
The Course of the Drain, Street, and Dimensions, 260; West Slope of Ophel, 262; A Flight of Five Steps, 263; "Stairs that go down from the City of David," The Fountain Gate, The Wall of the Pool, Searching for the Tombs of the Kings, 264; Types of Pottery, Coins, Lamps and Jars Found, Searching for a Theatre, 265; Rock-cut Chambers, Searching for a Flight of Steps East of Bab el Asbat, 267.
Jeshimon of the Bible, 119.
Jordan and Dead Sea, Carriages to, 168.

Khan ez Zeit, 29.
King's Garden and Topheth, 72.
Kubbet Shekfee Sakhra, 103.

"Latin Kingdom of Jerusalem," 169.
Libnah, 69.
Lower Pool of Siloam, Dam of, 2.

Mâdeba Mosaic, The, 167, 213 ; Note by Sir Charles Wilson, 239.
Market Hall or Place, 32.
Masonry, Remarks on, Arab, Byzantine, Crusaders', Jewish, Herodian, and Roman, 145.
Mediæval Topography of Palestine, 70.
Meteorological Observations at Jerusalem for 1894, 156; for 1895, 235.
Meteorological Observations at Tiberias for 1894, 160; for 1895, 231.

Nazareth, Greek Inscription from near, 188.
Notes and News, 1, 85, 167, 241.
Notes from Damascus, 147.
Notes on the *Quarterly Statement*—
The Shaft Tomb near the Tombs of the Kings, Rock under the Paving of the Upper Calvary Chapel, Criticism of Mahler's Dates, Abiri are the Hebrews, 83 ; The Stone Hat-Toîm, Jeshimon, Answers to Questions, 211 ; "Death's Doors," 212 ; The Sun God Aumo, Kahwaneh, Greek Inscription from Damascus, 84; Greek Inscription from Nazareth, The Siloam Text, 306.
Notes on the Seal found on Ophel, 181, 304, 309.

Obituary—Death of the Archbishop of Canterbury, 1.

Palestine Pilgrim's Certificate, 81.
Palestine Pilgrims' Text Society, 170, 243.
"Papyrus, Harris," The, 226.
Paved Street with Steps, 2.
Petra, Journey to, in 1896, 35.
Difficulties from Dangerous State of the Country had disappeared in 1896, Military Posts Established at Mâdeba, Kerak, Shobek, and Ma'an, Military Escorts Granted to Travellers, 35 ; Brook Cherith, Vegetation in its Spring Beauty, Storks, Tell Rameh, 36; Umm el Amad, Kûstûl, Kŭl'at Zizah, Great Reservoir at Zizah, Khan near the Pool and Ruins, Land Well Fitted for Cultivation, Abu Seyne not found, Haj Road, Beni Sakr, El Mattubbeh, Umm Mogr, Country Treeless, 37; Dome-Shaped Flint Stones, Kuneitran, Es Samik bearing south-west, Signs of Water Indicated by Red Poppies, 38 ; Kulat el Belka, Khan for the Haj Pilgrimage, Old Battlefield, Atara, Frankolin or Katta, A Large Wolf, Khan and Pool, Wild Rhubarb Plants, 39 ; Kutraneh, Ruins of Kusr Bsher, Description of Pool below Kusr Bsher, 40; Bearings, Letter from the Mutesserif of Kerak, Road from Kutrâneh to Kerâk, Wady el Hesy, Brook said to be Brook Zared of Moses, 41 ; Ard Suwwan, Water at Anêzy, 42 ; Bridge of Three Arches, Kŭl'at, Khan with a Cistern of Good Water, Shemmia, Small Stream, Pigeons and Partridges, 43 ; Brook from 'Ain Musa, Rock-cut Tombs, 44 ; Purple Red Cliffs, Oleanders and Figs, 134 ; Rock-hewn Cisterns, Kusr Faraon, Serai Faraon, Tomb, Inscription, 136 ; Many Coloured Wild Flowers, 137 ; Ma'an, Climate of Ma'an and Shimmia, Valley of Hismeh, Inscriptions said to be there, 138 ; Reservoir, 139 ; Tafileh, Roman Road, Buildings three miles East of Shobek, 142 ; Ghor es Safieh, 143 ; Jebel Usdum, 144.
Pierre Belon's Travels, Note on, 208.
Pool of Siloam, Church at, 2, 109.
Pool of Hezekiah, West Wall of, 107.
Portal of a Church at Acre to Cairo, Removal of a, 304.

Railways, Damascus, The, 198.
Railways, Damascus and Hauran Line, 200.
Raised Map of Palestine 6.

Sacred Vessels of the Temple? Where are the, 77.
"Saladin, Life of," 243.
Sculpture, Remarkable, at Mejdel, 33.
Seal found on Ophel, 181, 304, 309.
Siloam Text, Date of, 204.
Stone Dressing of Jerusalem, Past and Present, 61.

St. Richard, Inscription on Tomb of, 168.
St. Willibald, Hodoeporicon of, 168.
Superstitious Custom Connected with the Building Up of a Door, 148, 212.
"Syrian Stone Lore," 5.
Swastica or Fylfot, 153, 212, 242.

Tabernacle, Construction of, 154.
Tabernacle Roof, The, 225.
Temple and the Mount of Olives, 307.
Temple? Where are the Sacred Vessels of the, 77.
Temple, The, the Church of the Ascension, and the Finding of the Cross, 75.
Tombs of the Kings (so-called), 182.
Tombs, Rock Block with, 105.
Topheth and the King's Garden, 72.
Topography, Mediæval, of Palestine, 70.

Valley Gate and the Dung Gate, 69.

Walls, Jewish and Roman, 3.
Water, Quality of, in Jacob's Well, 67, 149, 196.
Well, Sādreyeh, The, Damascus, 147.

THE
PALESTINE EXPLORATION FUND.

NOTES AND NEWS.

Died

On the 11th October, 1896,

HIS GRACE THE ARCHBISHOP OF CANTERBURY

(DR. BENSON),

President of the Society.

The Committee received with great regret intelligence of the sudden death of their valued President, Archbishop Benson. His Grace had always been most courteous and kind, and taken a deep interest in the progress of the work of the Fund. They are happy to announce that the new Archbishop of Canterbury, Dr. Temple, has consented to become the President.

The Committee again desire most earnestly to draw attention to the financial position of the Fund. In response to their appeal made at and after the Annual Meeting, 35 subscribers of half-a-guinea have increased their subscriptions to one guinea, four subscribers of one guinea have raised their subscriptions to two guineas, and 58 special donations have been received, amounting together to £150 9*s*. The outstanding balance against the Fund has been reduced to £790.

The importance of the excavations now in progress, to all who take an intelligent interest in ancient Jerusalem, cannot be exaggerated. The success that has hitherto attended the devoted labours of Dr. Bliss and Mr. Dickie is incontestable. They are now at work in the Tyropœon Valley. For the Committee to be compelled for financial reasons to suspend or delay the completion of these excavations would be most lamentable from every point of view.

The Committee would therefore, in order to avert such a catastrophe, respectfully ask the majority of subscribers to the Palestine Exploration Fund to consider whether they will not endeavour to increase their subscriptions, at all events while these important excavations are in hand.

But the great need of the Fund is *new annual subscribers*, and if everyone interested in the exploration of the Holy Land could succeed in inducing one friend to become a subscriber, the financial difficulties of the Fund would be at an end.

Sir Charles Wilson writes:—"The principal feature in this year's excavations has been the determination of the dimensions of the true Pool of Siloam, and the discovery of the church built, or perhaps only rebuilt, by the Empress Eudocia, on its north side. Here we have, without doubt, the pool mentioned in the Bible, and it is to be hoped that the site may be purchased and the whole pool thoroughly cleared out and restored to its original condition as far as this may be possible.

"Next in interest is the paved street with steps, which is apparently that by which Antoninus descended to Siloam. This street points towards the 'Double Gate,' and by following it up that all-important landmark, the steps that go up to the City of David, may be discovered, and a clue obtained to the position of David's sepulchre.

"Of great interest also are the dam of the lower Pool of Siloam, the rock scarp that possibly marks the line of the old wall, and the researches connected with the wall on the western hill.

"The Fund is, I think, to be congratulated on the result of this season's work, and the promise it affords of a rich harvest of discovery during the present year. It is clear that we have arrived at one of the most important sites for excavation, and may possibly, before the year is ended, discover a clue to the ancient topography of the city. The rubbish is very deep, and excavation difficult. This means additional expense, which I earnestly trust may be met by increased subscriptions before the spring work commences."

Under date December 16th, 1896, Mr. H. A. Harper writes as follows:—

Last month, while in Jerusalem, I was so fortunate as to see a good deal of Dr. Bliss and also of Mr. Dickie. The Committee of the Palestine Fund have good reason to congratulate themselves on securing the services of such able explorers.

I had the honour of presiding at a lecture Dr. Bliss gave to a large party of tourists, and it was impossible not to express a hope that such a lecture would be given in London.

In company with Dr. Bliss I visited the scene of the excavations, and had the benefit of his explanations. Not wishing to anticipate his report to the Committee, I confine myself simply to calling attention to what I think are distinct Biblical gains in the last season's work.

Jerusalem is known to me fairly well, as I have drawn and painted the city from almost every point of view, but I was not prepared to find that in the old days it had extended so much further on the south-eastern side than is generally supposed, and yet, standing on the ground, Dr. Bliss pointed out

the line of his excavations, some of the most interesting of which had already been filled in, for the rains were expected, and he had altogether this year opened quite a mile of tunnels.

I saw portions of walls, Jewish and Roman, proving that on this south-eastern side the city had extended quite down into the valley, touching the Valley of Hinnom on one side and the King's Gardens on the other, and it seemed most probable that this wall, or two walls, had included and enclosed the Pool of Siloam.

If we turn to the book of Nehemiah, chapter ii, verses 12 and 13, we see how the Prophet "went out by night by the gate of the valley." *It seems to me that Dr. Bliss has found that gate.*

Chapter vii, verse 4, says:—"Now the city was large and great." Anyone consulting a map in the light of Dr. Bliss's discoveries will, I think, admit that the city was indeed "large," and this increased size will also explain how it was possible for so many people to inhabit Jerusalem as spoken of by later writers.

In chapter iii, verse 15, we read:—"And the wall of the Pool of Siloah by the King's Garden and unto the *stairs* that go down from the City of David"; and in chapter xii, verse 37:—"And at the fountain gate, which was over against them, they went up *by the stairs* of the City of David, at the *going* up of the wall, above the house of David, even unto the water gate *eastwards*" (*see also* chapter ix, verse 4). Dr. Bliss has found a grand flight of steps (Jewish) leading from the Pool of Siloam up to the city. He will doubtless describe them in full, but probably we have there the very "stairs" Nehemiah speaks of, and those by which people were accustomed to go down to the Pool of Siloam in the time of Our Lord.

To my mind any excavation which throws light on Bible statements is of the greatest value.

The Committee learned with much regret that Mr. Dickie had been laid up with a severe attack of fever and had to take a short voyage (to Alexandria) for his recovery. Dr. Lunn having kindly offered him a passage on board the "Midnight Sun." Mr. Dickie has returned to Jerusalem quite recovered.

The Rev. Theodore E. Dowling reports that the Sixth Annual Course of Public Lectures in Jerusalem is arranged for the forthcoming tourist season on Saturday evenings, as follows:—

Date.	Hotel.	Name.	Subject.
March 6	Grand New Hotel...	Edwin Wallace, Esq., U.S. Consul.	Over Jordan: its history, physical characteristics, and present inhabitants.
,, 13	Howard's Hotel ...	Rev. C. T. Wilson, M.A. ...	The Fellahîn.
,, 20	... Grand New Hotel ..	Rev. T. E. Dowling... ...	Kerak and Petra in 1896.
,, 27	... Howard's Hotel ...	F. J. Bliss, Esq., Ph.D. ...	The Lebanon.
April 3	... Grand New Hotel...	F. D'Erf-Wheeler, Esq., M.D., F.R.C.S.E., F.R.G.S.	The Jews in Jerusalem.
,, 10	... Howard's Hotel ...	F. J. Bliss, Esq., Ph.D. ...	The present excavations at Jerusalem.

A Public Concert will also be given in the Grand New Hotel, during the tourist season, to aid the *Palestine Exploration Fund* in their expenditure on excavations.

On October 28th Baurath von Schick completed the fiftieth year of his residence in Jerusalem. The esteem in which he is universally held was shown by addresses of congratulation coming to him from various countries and by the degree of *doctor philosophiæ et artium liberalium magister* being conferred upon him *honoris causâ* by the University of Tübingen, which is in his native country. The Committee of the Fund sent a special letter to Dr. Schick expressing their cordial congratulations and high appreciation of the very valuable contributions which he has made to the knowledge of ancient and modern Jerusalem.

Dr. Schick reports that a new church is being erected on the site of "the original, or Byzantine, Church of St. Stephen," north of Damascus Gate (*Quarterly Statement*, 1890, p. 9).

He also mentions that "tradition places the house of Simon the Cyrenian in the Via Dolorosa, the present Tarik el Serai, called also Tarik 'Aloun," and that recently the lowest house of this street, where it enters a cross road, the corner house, having come into possession of the Franciscans, has been marked with an inscription, the arms of the Franciscans with the pierced hands, and to the right and left Jerusalem crosses, all cut in relief in new stones and put into the old wall. Veronica's house is 220 feet higher up the same street (towards the west) and on the same (the southern) side.

Attention is drawn in our present issue to the extremely interesting question of what really now exists in the Cave of Machpelah, below the floor of the existing Haram. The Rev. Canon Dalton, who, as governor of the sons of the Prince of Wales, had with them the rare privilege of entering and examining the interior of the mosque, has contributed some valuable and curious notes and suggestions in connection with the translation of David Reubeni's account of his visit to the same sanctuary in A.D. 1523.

Dr. Masterman, of Damascus, writes that the work of rebuilding the fine old mosque is now being pushed on with great energy. Seven or eight monolithic columns (quite new) with beautifully carved Corinthian capitals have been erected, and the bases of a good many more were already in position. The work is chiefly at the east end of the mosque, and apparently it is intended to do that before the west end.

The income of the Society, from September 21st to December 21st, 1896, was—from annual subscriptions and donations, including Local Societies, £1,004 9*s.* 5*d.*; from all sources—£1,378 16*s.* 6*d.* The expenditure during the same period was £1,233 11*s.* 6*d.* On December 21st the balance in the Bank was £293 4*s.* 3*d.*

Dr. Post's "Flora of Syria, Palestine, and Sinai," is now ready, and may be obtained on application to the author at Beirût. (*See* advertisement.)

The work embraces 126 orders, 850 genera, and 3,416 species, many of the latter, as well as numerous varieties, being new to science. It is illustrated by 445 woodcuts, and a coloured map, showing the botanical regions of the district covered. It contains a general analytical key to all the orders, and special keys to the larger tribes and genera. Much labour has been expended on these keys, and it is hoped that, by their means, the usefulness of the book will be greatly increased, especially for students and travellers.

His Grace the Archbishop of York has kindly accepted the office of President of the York branch of the Fund.

The following gentlemen have kindly consented to act as Honorary Local Secretaries:—

Henry J. Bailey, Esq., M.D., for Bishopstoke, Hants.

Rev. T. Forbes, for Bolton and Horwich, in place of Rev. S. Bond, resigned.

E. G. Treyer, Esq., has become Honorary Treasurer for Damascus and Beirût.

The first portion of M. Clermont-Ganneau's work, "Archæological Researches in Palestine," is now ready, and being sent to subscribers.

Memo. for Subscribers to the Survey of Palestine.—In the original programme it was intended that the "Archæological Researches" of M. Clermont-Ganneau should be published in one volume, but the work increased so much since its commencement that the Committee found it necessary to arrange for the publication of the whole in two volumes. Vol. II has been published in advance for the reasons stated in the prefatory note.

Vol. I, which treats of Jerusalem and its neighbourhood, is well forward, and, when ready, will be sent out to the first 250 Subscribers without any increase in their subscriptions for the full set.

There are only a few copies of the sets left at the price of £7 7*s*. When these have been cleared out the price will be raised to £12 12*s*. (*See* advertisement in fore-part of Journal.)

A third and revised edition of "Syrian Stone Lore," by Lieut.-Colonel Conder, R.E., is now ready.

An important work by Lieut.-Colonel Conder, R.E., entitled, "The Latin Kingdom of Jerusalem"—1099 to 1292 A.D.—and describing the condition of Palestine under the Crusaders, is now ready. It is based on the chronicles and contemporary accounts, both Christian and Moslem, and on

the information collected during the progress of the Survey, with descriptions of the scenes of the important events, and other information not to be found in previous histories of the Crusades. The whole will form an octavo volume of about 400 pages, with two maps, giving the Crusading names and boundaries of the "Fiefs" throughout Palestine.

Boha ed Din's "Life of Salah ed Din," translated from the Arabic, is in the Press, and nearly ready for publication. It forms the concluding volume of the Palestine Pilgrims' Text Series of Translations.

A complete set of the Palestine Pilgrims' Text Translations in 12 volumes, with Index, bound in cloth; price, £10 10*s*. For contents of volumes, *see* end of *Quarterly Statement*.

Branch Associations of the Bible Society, all Sunday Schools within the Sunday School Institute, the Sunday School Union, and the Wesleyan Sunday School Institute, will please observe that by a special Resolution of the Committee they will henceforth be treated as subscribers and be allowed to purchase the books and maps (by application only to the Secretary) at reduced price.

The Committee have to acknowledge with thanks the following donations to the Library of the Fund:—

"Palestine, the Glory of all Lands." By Rev. Archibald Sutherland. Edinburgh, 1896. From the Author.

"Flora of Syria, Palestine, and Sinai." By Rev. George E. Post, M.A., M.D. Beirût, 1896. From the Author.

"Anecdota Oxoniensia—Mediæval Jewish Chronicles." By Ad. Neubauer. Oxford, Clarendon Press, 1895. From Rev. Canon Dalton, C.M.G.

"Litterarischer Palästina-Almanach." By A. M. Luncz. Jerusalem, 1896. From the Author.

"Six Months in Jerusalem." By Rev. Charles Biggs, M.A., 1896. From the Author.

"The Veil Lifted—A New Light on the World's History." By H. Martyn Kennard. From the Author.

The Committee will be glad to receive donations of Books to the Library of the Fund, which already contains many works of great value relating to Palestine and other Bible Lands. A catalogue of Books in the Library will be found in the July *Quarterly Statement*, 1893.

Mr. George Armstrong's Raised Map of Palestine is on view at the office of the Fund. A circular giving full particulars about it will be sent on application to the Secretary.

The third edition of the new Collotype Print or Photo-relief from a specially prepared copy of the Raised Map of Palestine is now ready. Price to subscribers, 2*s.* 3*d.*; non-subscribers, 3*s.* 3*d.*, post free.

The print is on thin paper, measuring 20 inches by 28½ inches.

It having again been reported to the Executive Committee of the Palestine Exploration Fund that book hawkers are representing themselves as agents of the Society, the Committee have to caution subscribers and the public that they have no book hawkers of any sort or kind in their employ, and that NONE OF THEIR WORKS ARE SOLD BY ANY ITINERANT AGENTS.

The museum of the Fund, at 24, Hanover Square, is now open to subscribers between the hours of 10 a.m. and 5 p.m., every week-day except Saturdays, when it closes at 2 p.m.

It may be well to mention that plans and photographs alluded to in the reports from Jerusalem and elsewhere cannot all be published, but all are preserved in the offices of the Fund, where they may be seen by subscribers.

Subscribers are requested to note that the following cases for binding, casts, and slides can be had by application to the Assistant Secretary at the Office of the Fund:—

Cases for binding Herr Schumacher's "Jaulân," 1*s.* each.

Cases for binding the *Quarterly Statement*, in green or chocolate, 1*s.* each.

Cases for binding "Abila," "Pella," and "'Ajlûn" in one volume, 1*s.* each.

Casts of the Tablet, with Cuneiform Inscription, found at Tell el Hesy, at a depth of 35 feet, in May, 1892, by Dr. Bliss, Explorer to the Fund. It belongs to the general diplomatic correspondence carried on between Amenhotep III. and IV and their agents in various Palestinian towns. Price 2*s.* 6*d.* each.

Casts of the Ancient Hebrew Weight brought by Dr. Chaplin from Samaria, price 2*s.* 6*d.* each.

Casts of an Inscribed Weight or Bead from Palestine, forwarded by Professor Wright, Cambridge, Mass., U.S.A., price 1*s.* each.

Lantern slides of the Raised Map, the Sidon Sarcophagi, and of the Bible places mentioned in the catalogue of photos and special list of slides.

In order to make up complete sets of the *Quarterly Statement* the Committee will be very glad to receive any of the back numbers.

While desiring to give publicity to proposed identifications and other theories advanced by officers of the Fund and contributors to the pages of the

Quarterly Statement, the Committee wish it to be distinctly understood that by publishing them in the *Quarterly Statement* they neither sanction nor adopt them.

Subscribers who do not receive the *Quarterly Statement* regularly are asked to send a note to the Secretary. Great care is taken to forward each number to those who are entitled to receive it, but changes of address and other causes occasionally give rise to omissions.

The authorised lecturers for the Society are—

AMERICA.

Professor Theodore F. Wright, Ph.D., 42, Quincy Street, Cambridge, Mass., Honorary General Secretary of the Palestine Exploration Fund for the United States. His subjects are as follows:—

(1) *The Building of Jerusalem.*
(2) *The Overthrow of Jerusalem.*
(3) *The Progress of the Palestine Exploration.*

ENGLAND.

The Rev. Thomas Harrison, F.R.G.S., The Vicarage, Appledore, Ashford, Kent. His subjects are as follows:—

(1) *Research and Discovery in the Holy Land.*
(2) *Bible Scenes in the Light of Modern Science.*
(3) *The Survey of Eastern Palestine.*
(4) *In the Track of the Israelites from Egypt to Canaan.*
(5) *The Jordan Valley, the Dead Sea, and the Cities of the Plain.*
(6) *The Recovery of Jerusalem*—(*Excavations in* 1894).
(7) *The Recovery of Lachish and the Hebrew Conquest of Palestine.*
(8) *Archæological Illustrations of the Bible.* (Specially adapted for Sunday School Teachers).

N.B.—All these Lectures are illustrated by specially prepared lantern slides.

The Rev. Charles Harris, M.A., F.R.G.S., Appledore, Ashford, Kent. (All Lectures illustrated by lantern slides.) His subjects are as follows:—

(1) *Modern Discoveries in Palestine.*
(2) *Stories in Stone; or, New Light on the Old Testament.*
(3) *Underground Jerusalem; or, With the Explorer in* 1895.
Bible Stories from the Monuments, or Old Testament History in the Light of Modern Research:—
(4) A. *The Story of Joseph; or, Life in Ancient Egypt.*
(5) B. *The Story of Moses; or, Through the Desert to the Promised Land.*
(6) C. *The Story of Joshua; or, The Buried City of Lachish.*
(7) D. *The Story of Sennacherib; or Scenes of Assyrian Warfare.*
(8) E. *The Story of the Hittites; or, A Lost Nation Found.*

Scotland.

The Rev. J. R. Macpherson, B.D., Kinnaird Manse, Inchture, N.B. His subjects are as follows:—

(1) *Excavations in Jerusalem*, 1868–70, 1894–5.
(2) *Lachish, a Mound of Buried Cities; with Comparative Illustrations from some Egyptian Tells.*
(3) *Recent Discoveries in Palestine—Lachish and Jerusalem.*
(4) *Exploration in Judea.*
(5) *Galilee and Samaria.*
(6) *Palestine in the Footsteps of our Lord.*
(7) *Mount Sinai and the Desert of the Wanderings.*
(8) *Palestine—its People, its Customs, and its Ruins.* (Lecture for Children.)

All illustrated with specially prepared lime-light lantern views.

The Rev. James Smith, B.D., St. George's-in-the-West Parish, Aberdeen. His subjects are as follows:—

(1) *The Palestine Exploration Fund.*
(2) *A Pilgrimage to Palestine.*
(3) *Jerusalem—Ancient and Modern.*
(4) *The Temple Area, as it now is.*
(5) *The Church of the Holy Sepulchre.*
(6) *A Visit to Bethlehem and Hebron.*
(7) *Jericho, Jordan, and the Dead Sea.*

The Rev. W. Burnet Thomson, M.A., B.D., Galashiels, N.B. His subjects are as follows:—

(1) *The City of the Great King; or Jerusalem and the Explorer.*
(2) *The Temple, the Sepulchre, and Calvary.*
(3) *Southern Palestine.*
(4) *Jerusalem to Damascus.*
(5) *Palestine and Jesus Christ (for children).*
(6) *The Bible and the Monuments. Discoveries in Ancient Land.*

All illustrated with lantern slides.

Wales

The Rev. J. Llewelyn Thomas, M.A., Aberpergwm, Glynneath, South Wales. His subjects are as follows:—

(1) *Explorations in Judea.*
(2) *Research and Discovery in Samaria and Galilee.*
(3) *In Bible Lands; a Narrative of Personal Experiences.*
(4) *The Reconstruction of Jerusalem.*
(5) *Problems of Palestine.*

Application for Lectures may be either addressed to the Secretary, 24, Hanover Square, W., or sent to the address of the Lecturers.

Tourists are cordially invited to visit the Loan Collection of "Antiques" in the Jerusalem Association Room of the Palestine Exploration Fund, opposite the Tower of David. Hours: 8 to 12, and 2 to 6. Maps of Palestine and Palestine Exploration Fund publications are kept for sale. Necessary information will be gladly given by the Rev. Theodore E. Dowling, *Hon. Sec.*

Scale

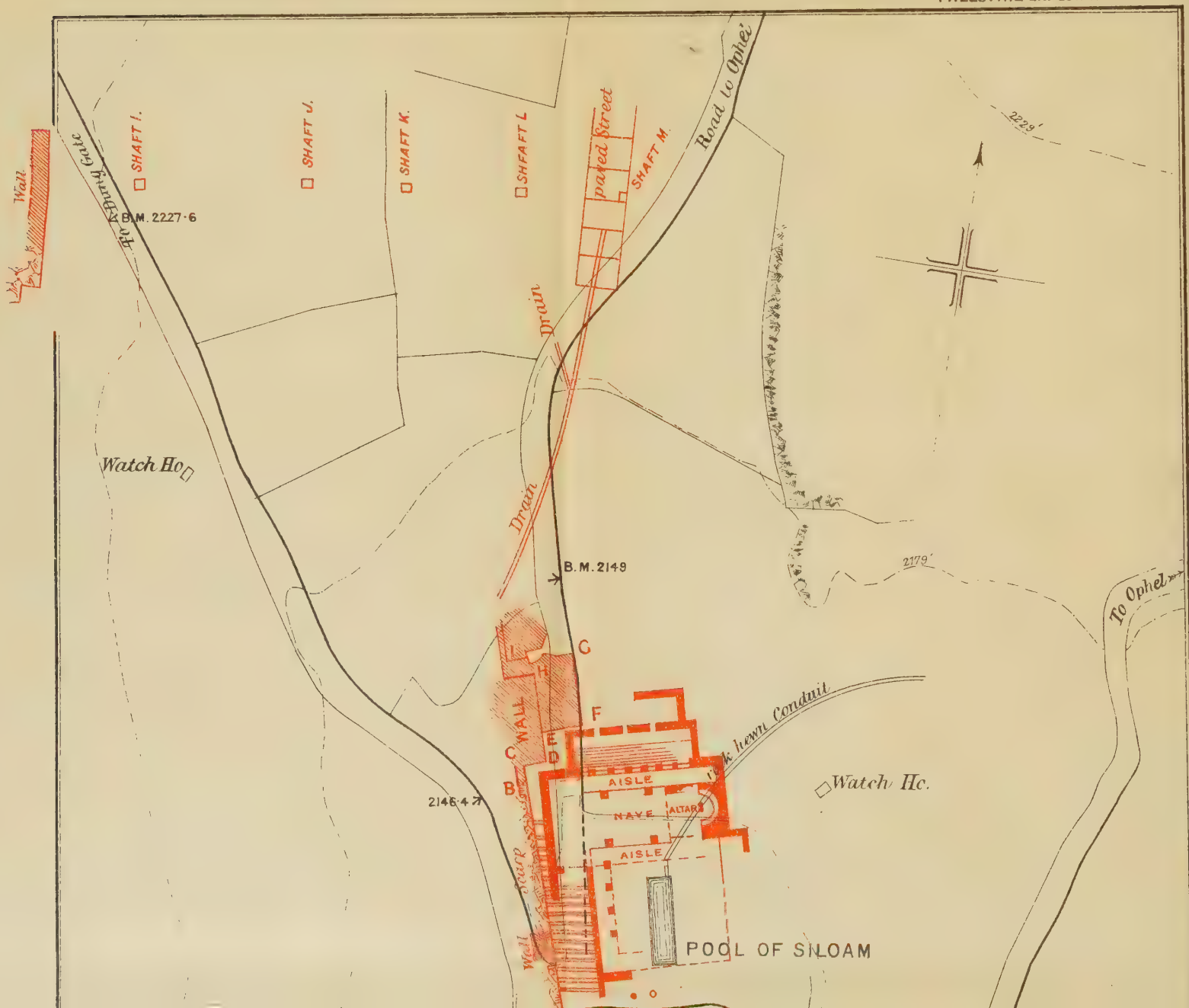
Feet 100 0 100 200 300 400 Feet

Vincent Brooks, Day & Son lith

PLAN TO ILLUSTRATE Dr BLISS'S ELEVENTH REPORT.

The Detail in Black from the Enlarged Ordnance Survey Plan, the Excavations in red.

PALESTINE EXPLORATION FUND.



ELEVENTH REPORT ON THE EXCAVATIONS AT JERUSALEM.

By F. J. Bliss, Ph.D.

The present report is intimately connected with the last, as it shows the development of certain clues already given during the summer season. The results obtained have been in part positive and in part negative, with a decided balance in favour of the former. We have proved that the built stairway made use of a system of rock-hewn steps, probably older, and lead to a court in front of the Pool of Siloam. Our work at the pool itself, taken in connection with that of Dr. Guthe, has determined its ancient limits. An historic church has been discovered so excellently preserved that we have been able not only to recover its main outlines, but to trace many particular features. The paved road to the north of the pool has been traced 30 feet south of the point described last season. Valuable work has been done on the wall crossing the Tyropœon below the pool, and its south-east angle has been found. The season has had its disappointments, the chief one being our failure to find the continuation of the wall to the west of the old pool.

This wall, it will be remembered, was traced from L to A, the last part being on a scarp, which ran on for 290 feet from A to B. Between these two points no wall was found on the scarp, the top of which could not always be seen, for reasons given, except that a few stones were seen between the top step of the stairway and B. This wall continues to C, with an unsatisfactory face, from whence we described it in our last report, as breaking out 14 feet to the east, where it forms a strong corner at D, the masonry along the line CD being much better than that of the line BC. At E the wall breaks out to F, where it again forms a strong corner. It then runs north to G, to which point it was traced when the last report closed. From the corner G we tunnelled west along an irregular face to I, where the wall runs out to nothing. The enormous thickness, FG, ascertained at a point midway between F and G, proves that EFG is a solid mass of foundation work, added on to DH. For DE continues back of EF as far as H, and while tunnelling along a miserable face between F and G we were really quarrying through this added blockage. Following the face to the west for 18 feet from H we found this wall also running out to nothing. Attempts to find its thickness made from the east and north proved that this also is a great foundation blockage.

The work done here during the last season illustrates the dangers of trying to make a report intelligible when a given excavation has not been exhaustive. Arguing from the massive nature of the wall between C and G, we had assumed that it was connected with the bit of wall, BC, which was supposed to have been once joined to the wall L to A

by a wall on the connecting scarp. The first part of this theory has now been proved untenable. Having lost all clues to the north, we returned to the crucial point C. A few hours' work showed that the wall BC is unconnected with CD, the latter forming a true corner at C, with a face running to the north. Against this earth is piled up, showing that whatever the wall BC may have been it is quite gone north of the point C. BC is much ruined, and appears to be of slight thickness, though the rapidly rising rock to the west makes the question of its original breadth uncertain. The exact purpose of the great blockage CDGI is undetermined, though the work upon it has cost us an infinite labour of tunnelling and quarrying. As the fall in the rock between B and F is 15½ feet (the blockage at these two corners resting on the rock) it is evident that we have here a filling up of the valley to support some important building. Its relation to the Roman Stairway and to the Byzantine Church indicate that it is later than both of these. The line IG, though a real face, does not indicate the extent to which the valley has been blocked up with masonry, for in a shaft immediately to the north, from which the line IG was reached, we had to quarry through a confused mass of building to a depth of 20 feet, below which there was soil.

The absence of a western door in the church (to be described later) favours the idea that a wall once ran along the scarp from A to B. This may be either city wall, interrupted by the later blockage, or a wall to protect the two pools. It is possible that part of this wall may have been seen by us. At a point about opposite the south wall of the pool we drove a tunnel west from the top of the scarp and at a distance of 6 feet, we found a fragment of wall 8 feet thick. Only 11 feet of its length remain. Two courses of dressed stones appear, 18 and 20 inches high respectively. The stones have chisel-drafted margins, with centres projecting from ½ an inch to ¾ of an inch, chisel-picked. They are well squared and set, no lime being used on the face, though it was observed on the inside of the wall. It resembles the masonry found at L in the line LA. Search for a continuation of this wall was made by driving a tunnel west from C for 20 feet, but nothing was found.

While sinking a shaft to the west of the road in line with the series of shafts across the Tyropœon (*see* plan), we came on a wall whose thickness of 8 feet showed it to be worthy of examination. It rests upon a scarp, found at one point to be 9 feet high. Several courses are standing for a distance of 61 feet south of the point where it strikes the road. Then for 33 feet there are clear indications of masonry foundations, continuing as the scarp turns west for 9 feet 4 inches, where it again was traced south for 11 feet. Here the excavation was temporarily suspended. Twenty feet south of the road there is a rock-hewn chamber cut back into the scarp, with two square doorways, roughly lintelled by the wall, which here is 12 inches out from the face of the scarp against which it is built. The scarp thus seems to be older than the wall, but the chambers

were still in use when the latter was built. Indications of rock-chambers were also found near the turn of the scarp further south. The masonry of this wall consists of rough stones set in lime, with courses averaging 10 inches high. Though its scarp is not in line with the scarp to the west of the pool, we intend to trace it further south.

In the meantime, we have been pushing a tunnel north from IH in the hope of catching any line of city wall that may cross the Tyropœon. Up to the time of writing, 80 feet of tunnelling in the rock have revealed no signs of such a wall. Negative results are sometimes as important as positive ones, and in looking at the plan the reader must remember that the red lines by no means indicate the whole of our work.

Far more satisfactory has been the work along the wall which crosses the Tyropœon Valley below the pool. Various periods of reconstruction are indicated by different kinds of masonry, proving this to have been the line of the city wall for a very long time. We cannnot hold Eudocia responsible for them all, though this Imperial lady has complicated our excavations at various points. Our work here has been very extensive, but it is still going on, and I prefer to reserve my description till this corner has been carefully drawn in detail.

The great stairway to the west of the Pool of Siloam was generally described in the last *Quarterly*, but further investigation demands a few alterations. On the west the steps butt up against the scarp, and on the east against the west wall of the original pool, which also served as their parapet. As the scarp and wall are not parallel, the breadth of the steps varies from 27 feet at the top to 22 feet at the bottom. The number of steps is 34. They vary in height from 6 to 9½ inches, and are arranged in a system of wide and narrow treads alternately, the wide treads from 4 feet 3 inches to 4 feet 11½ inches, and the narrow ones from 11 inches to 17. The main part of the stairway, as seen, consists of steps built of hard, well-jointed stones, laid on a bed of chips and weak mortar, formed of mud and lime. But pushing along the whole breadth of the stairway along step A (*see* plan of Stairway and Pool) to the parapet wall, we found that for 10 feet 9 inches from the scarp the tread consists of the natural rock well polished by foot-wear. For a foot from the scarp the tread is 6 feet 4 inches broad ; for the rest of this distance the breadth varies from 3 feet 9 inches to 3 feet 4 inches. Then for 5 feet the tread consists of a patchwork, the irregular rock being levelled up with bits of paving. Here the breadth has the normal measurement of 4 feet 4 inches, the additional breadth being furnished by a stone step which could never have been straight to the scarp, as the plan and section EF will show. From this point to the parapet the tread is of laid stones. In our tunnel down the steps, a few feet from the parapet, we found several instances where paving stones levelled up the rock, but in general the steps were built. However, pushing a tunnel south from A, along the scarp, a system of rock-hewn steps, well polished, appeared. Their treads are of varying breadths, one of them being patched up with a stone step. They are at slightly higher levels than the corresponding steps of the stair near the parapet.

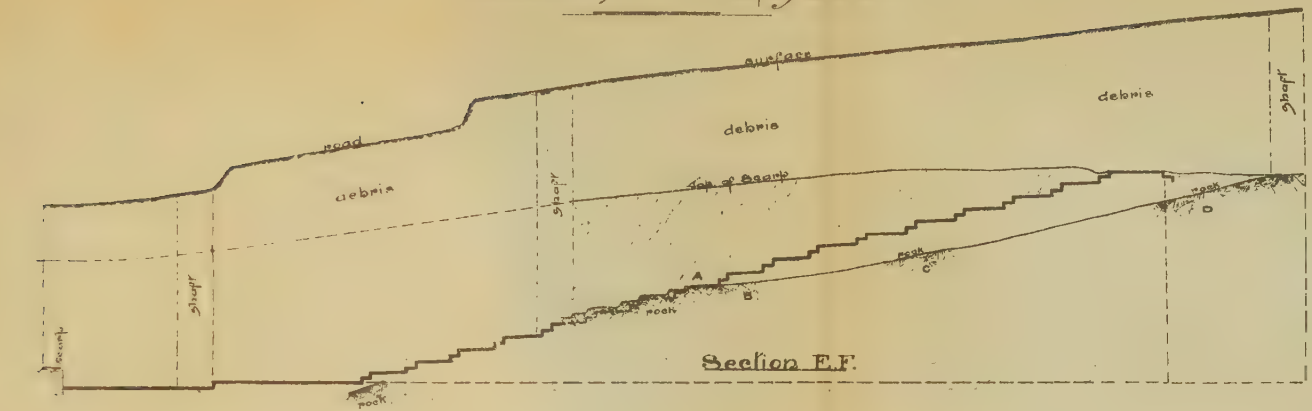
Accordingly, it is needless to say that they do not represent an older system of steps, covered at a later period by stone steps which have since disappeared. But that they represent an older system of steps, enlarged and extended by the builders of the stone system at this point, seems probable. Though well polished by foot-wear, they are very rudely cut, in great contrast to the well-squared stone steps, and the two cannot be ascribed to the same constructors. Had the rock fallen naturally at the time of the builders of the stone steps at this point, they would either have cut well-squared rock steps or have cut down the rock to a level admitting of the insertion of stone steps to correspond in level to the rest of the system.

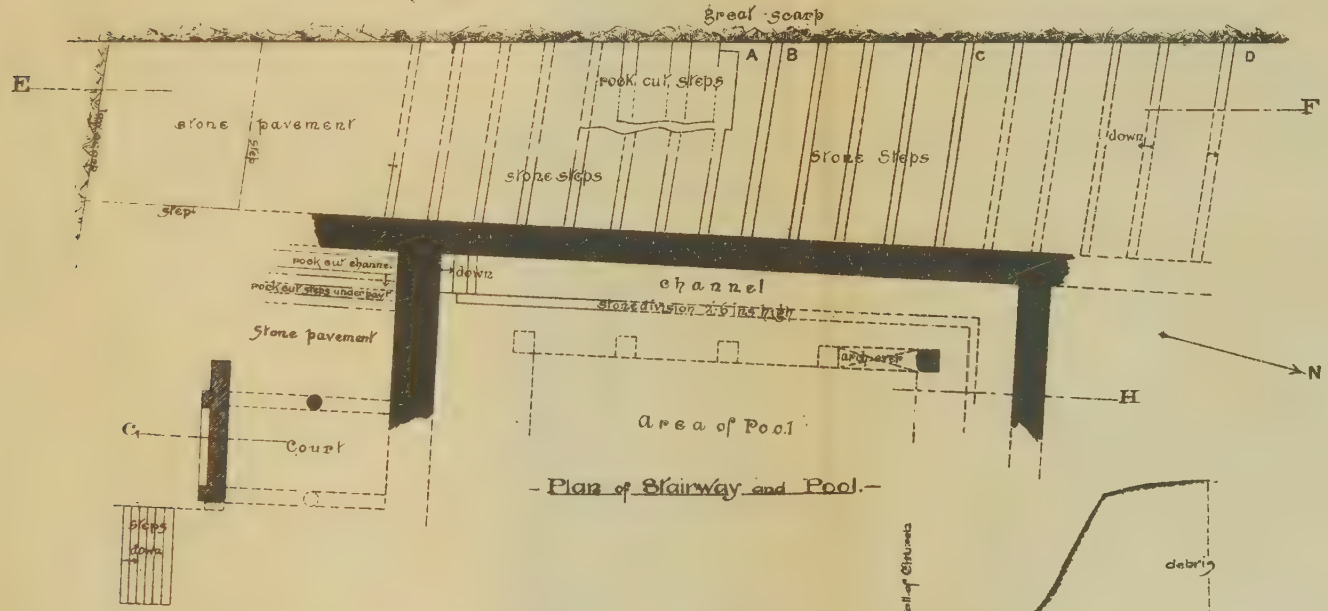
North of A we removed stone steps at the points B and C to find out if the rock was cut into the form of steps. In both places it was found to be in a natural irregular state without foot-wear, and at C some of the red, natural soil was still clinging to it. The rock was also seen below the top of the stairway at D. The easy fall of the rock shows that the road might have run along the red earth, without steps, as far as A.

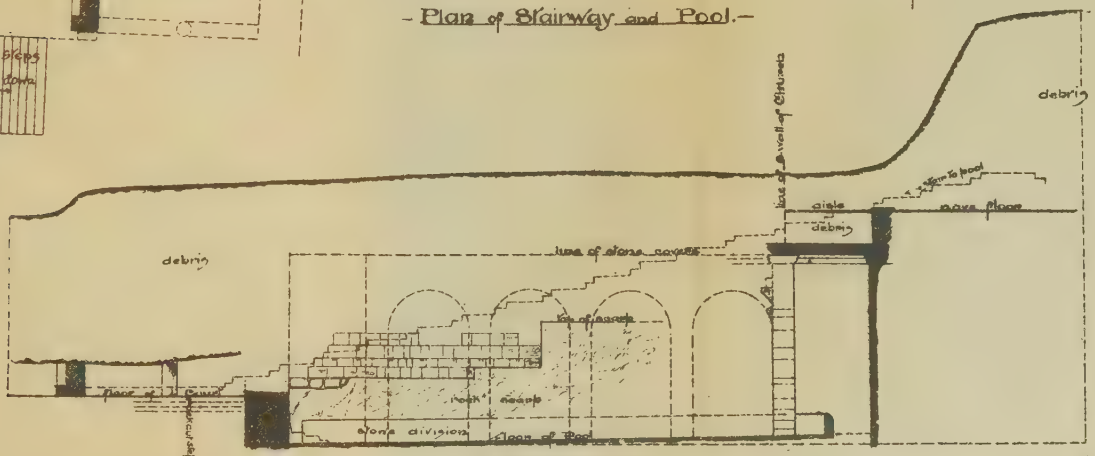
The top of the stone-step system is shown by the much broader tread at D and the single step *down* from it to the north. The approach from the north is one of the unsolved problems. The stairway points to the fine paved road further north. But between them interposes the curious large blockage which we had wrongly supposed to be part of the city wall. Although this building rests on the rock, which falls rapidly to the east, we are forced to suppose that it was erected after the steps were disused, for so magnificent a stairway must have had a clear space in front of it. We pushed 20 feet east from the corner C of this blockage, partly to see whether the approach to steps might not have been to the west of it, but the rock rises so rapidly that this theory is impossible. Accordingly I infer that the paved road once led down to the steps, especially as they are of the same class of work. Further investigation may help to settle this point.

Though our excavations at the pool were not undertaken originally for the sake of studying the pool itself, but rather to determine questions relating to the stairway and the church, before showing the connection between the stairway and the pool it will be convenient to show first what light has been cast upon the latter. We first struck the western wall of the original pool, where we found step A butting up against its western face, which thus also served as a parapet for the stairway. In the last report I gave its thickness at 3 feet, and said that it was set back from a scarp. Further investigation has shown that the true eastern face had been ruined, and that it was originally plumb with the scarp, giving a thickness of 4 feet. For on sinking with the scarp and tunnelling south we found the true face of the wall, in line with the scarp, the latter rising here for 5 feet 6 inches, as may be seen in section GH. This wall was traced south for over 30 feet where a corner was reached. At this end five courses of masonry were seen, the lowest, of rough stones, set on the top of the scarp. The courses vary in height from 12 to 18 inches.

Excavations at Pool of Siloam







Expenses by F. J. Bliss.
Measured & drawn by Archd. Dickie

The stones are mainly small, their lengths varying from 1 to 3 feet. They are well jointed and set in lime, with a fine comb-pick dressing, appearing faintly, as the wall is much weathered. At intervals varying from 3 feet 1 inch to 4 feet 2 inches in the second course of good masonry from the bottom, are bevelled sinkings in the stones 5½ inches square, 1½ inches deep at top of stone, the bevel running out as it descends. They look like cuttings made for the purpose of a raking strut to shore the wall, but why this should have been necessary in a course practically resting on the scarp, is hard to explain. Fallen in front of the wall were two large stones ornamented with an inverted ogee moulding and fillet. The scarp is not very well worked, and has a decided batter. The wall turning to the east from the corner is 5 feet 3 inches thick. At the angle three rock-hewn steps were found, descending to the north. East of these steps a pavement appears. At a distance of 4 feet 6 inches from the west scarp, and running parallel to it, a stone division was traced for 21 feet. This is 2 feet 6 inches high, 12½ inches broad, and has a rounded head, as seen from section GH.

We had thus reached the south-west angle of the original pool. The north-west and north-east angles had been determined by the excavations of Dr. Guthe, giving to the northern wall a length of 75 feet. The west wall runs at right angles to the northern wall, and the distance between the south-west and the north-west angles is 71 feet; hence we have proved the original pool to have been almost square. A happy accident permitted us to see the north-west angle. While sinking a pit in search for the south wall of the church, a thick block of stone was observed at one side of the pit, under which the earth began to run. Crawling under the stone, we found ourselves beneath a roof of huge covers extending from the top of the wall to a large pier. The earth which had once filled the place had sunk, leaving an area some 4 feet high where we could examine this north-west angle at our leisure. The cover at the angle has a clear bearing of 10 feet by 9 feet 7 inches. The moulding of the wall is precisely similar to those found on the stones fallen in front of this same wall further south. The masonry is also quite similar, but as the roof is here preserved, the stones are not weathered. Dr. Guthe indicates on his plan the position of the pier but as he does not draw this in elevation, we sank a shaft along its side, desirous also of comparing the level of the floor with that of the pavement found near the south-west corner and with that of the modern pool. At a height of 12 feet 9 inches from the pavement, the first springer of an arch is seen on the pier, indicating an arcade on this side of the pool. Some of the stones of the pier have a fine comb-pick margin, with a very fine pock marking in the centre. The level of the floor of the arcade at this point is 1 foot higher than that of the pavement found at the south-west angle, and is level with that of the present pool at a point opposite, strong indication that the portico was included in the pool itself, a fact also proved by the relative levels of the portico pavement and the outlet channel, to be noticed presently. The stone division with rounded head was found to be

in the same position relative to the wall as seen to the south. The north-east angle of this same division, evidently a feature of the arcade, was seen by Guthe, as well as a considerable portion to the west and south of the corner.

We may safely assume that the arcade ran around the four sides of the pool, and represents the "quadriporticum," or four-sided arcade of the Bordeaux Pilgrim. The channel left between one division wall and the limits of the pool was found by Dr. Guthe to have a cement bottom. The rounding of its head towards the channel, and the extreme polish on its stones, suggest that it may have been used as a bench where pilgrims could have sat and bathed their feet. The depth of this channel he did not find. A tunnel in the rock, forming the base of the south wall of the pool, shows how the overflow was carried off.

A glance at section EF will show that a large part of the western wall of the pool was hewn out of the solid rock. I have spoken of this arcaded pool as the original pool, viewed in relation to the present pool, which is a contraction within the area of the former. However, it seems probable that this rudely-hewn scarp indicates the western line of the pool before it was built up in Roman times.

To the south of the pool wall an extensive pavement was found, 5 feet 9 inches higher than the level of the pool pavement. This allows for a depth of water available for all bathing purposes. The southern limit of the pavement was shown by the low scarp, some 37 feet south of the pool wall. Leading down on to this pavement from the south were found eight steps, the stairway being ruined at the top. We have here evidently a court in front of the pool. Resting on the pavement (and hence constructed after it) was found a wall with a column in front of it, also placed on the pavement.

The west wall of the pool was also used as a parapet for the stairway, and this continues south beyond the pool corner. In the south interior angle were found several rock-cut steps, all below the level of the pavement which has now disappeared at this point, but which once must have covered them.

We are now in a position to suggest, with great probability, the *terminus ad quem* of the two systems of steps described above. They were both of them means of access to the pool. The rock-cut system, traced for only a short distance south of A, may have descended to a point just opposite to the rock-cut steps just mentioned, and then have turned at right angles to the scarp terminating with these latter steps. The built system terminates in a level pavement which extends south for 18 feet, when a step down occurs. This pavement continues south (in a more or less ruined condition) for 19 feet, when it butts up against the scarp afore-mentioned. A step to the east, however, brings it on to the pavement of the court in front of the pool. At the point where last seen the south wall of the pool was ruined down to the level of the pavement, hence it is probable that the entrance from the paved court no longer exists.

The most complete discovery of the season is that of the church immediately to the north of the present Pool of Siloam, and with its south aisle built over the north arcade of the ancient pool. To what an extent this discovery is complete may be seen from the plans and sections. Not only has the general form been recovered, but we have found many of the details, and the only part not clear is that just within the west wall.

The inside measurements of the church are as follows :—Length, 84 feet ; breadth, 51 feet 6 inches ; width of nave, 25 feet 10 inches ; width of aisles, 10 feet 5 inches ; assumed length of atrium, 62 feet ; ascertained breadth of atrium, 17 feet 8 inches. The church is remarkably well preserved for a buried building. The flooring was found to be intact, wherever we struck its level, with the exception of a large part of the north aisle, and a portion of the west end of the church. In the arcade the west pier stands to its full height, as especially determined, while the tunnel, though in places 7 feet high, did not reveal in most cases how much of the others still remain. The west wall is preserved in places to a height of 6 feet, as is the south-east angle of the chapel. The steps of the apse are largely intact.

The discovery was made by accident and illustrates a frequent experience of the excavator, who, in searching for one thing, often finds another. I have shown (on p. 302 of the *Quarterly* for 1896) how we pushed east from the scarp along the top step of the great stairway, in the hope of finding its breadth at that point, and how, 7 feet from the scarp, we found a wall, 4 feet 4 inches thick, running not quite parallel to the scarp. I showed that this wall was later than the steps, as these were broken off irregularly to give place to it. Since then in digging in the south aisle we have found a continuation of the steps buried beneath the level of its flooring. Even while writing the last report I had a hope that we were on the track of the ancient church, which is known to have existed near the Pool of Siloam. But as my guesses could not then be supported by any evidence, I withheld the suggestion. On our plan, published with this report, the hard lines represent parts actually seen, and the dotted lines those inferred. On first looking at the plan and noticing the great preponderance of hard lines, the reader will naturally suppose that, were he on the ground, at one glance he could see the whole form of the church, and that by walking about he could study the details in the open air. Such, however, is not the case Expecting to see a church, he would find only a cauliflower field. The whole floor, with the exception of the south aisle, where the soil is slight, is still buried under a mass of *débris* varying in height from 12 feet above the atrium to 22 feet above the north aisle and the nave. Section AB is valuable in showing how impossible it is to infer original levels from modern terracing. The recovery of the church is due to a system of tunnels, the added lengths of which come to more than 500 feet. As the length of the church and its appendages is only 115 feet, and the breadth 100 feet, how completely honey-combed the excavated area must have been will

B

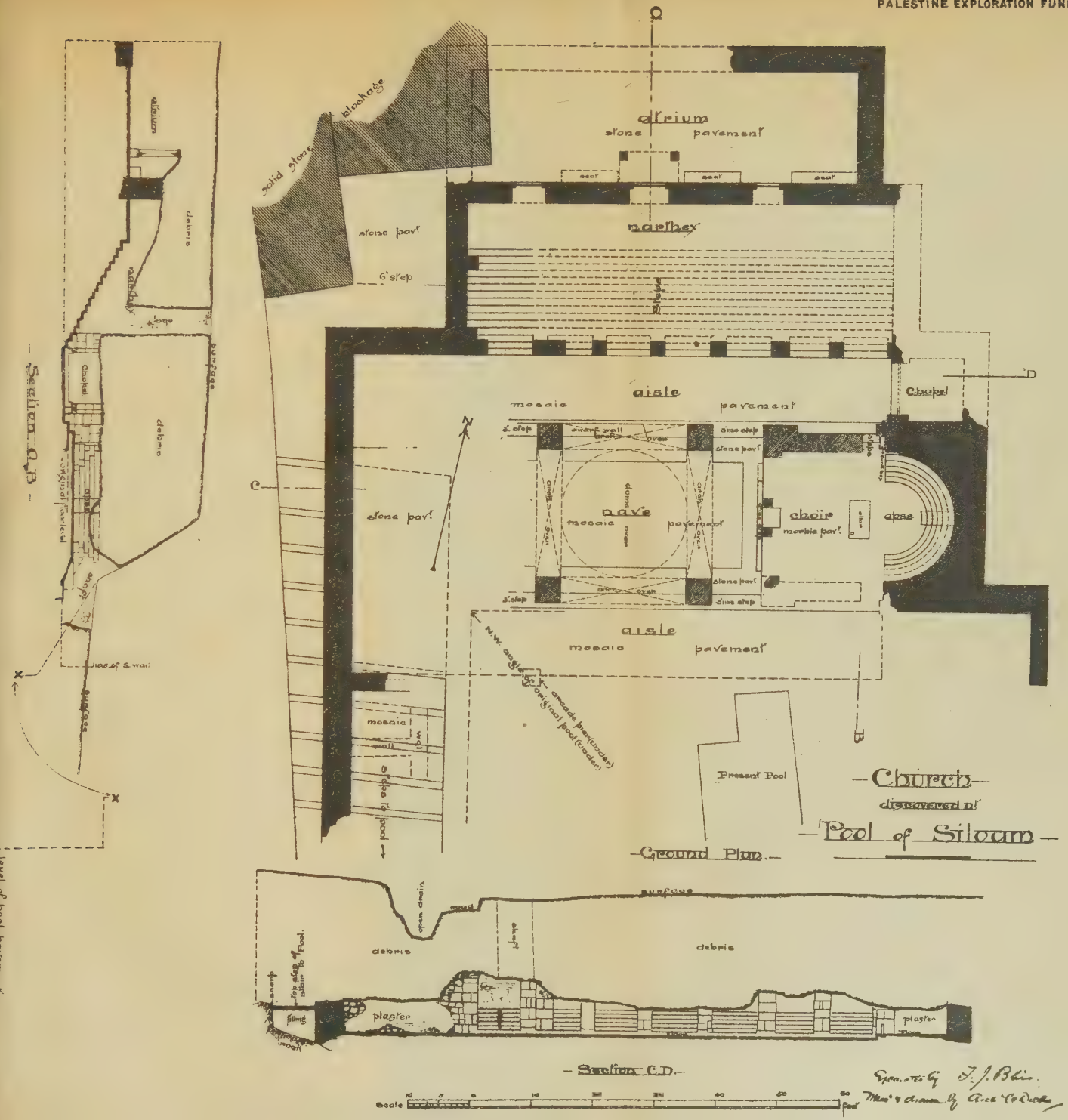
appear at once. How ticklish some of the tunnelling was, will appear in the course of my description of the excavation.

When we had discovered the west wall, as recorded above, we sunk to the flooring, which we found to be of stone pavement, and pushed southwards to its south-west corner, in a tunnel separated from the lofty tunnel above the steps only by the wall itself, which, fortunately for safety, stands here to a height of 6 feet. On the outside, this wall consists of well-squared, well-set stones, in courses averaging 21 inches high, set on large foundation work, rudely laid. The dressing is plain-faced, comb-picked or chiselled; a few margined and picked-centred stones are seen. The faces of the joints have a rough trowel pointing. It extends indefinitely to the south beyond the place for the south-west outer angle of the church, though the masonry grows ruder. The inside face of the wall is plastered.

Turning to the east, we tunnelled 6 feet from the corner, coming upon a door, with a step of 7 inches leading to a small chamber paved with white tesseræ. Going over its east wall we found this running for some distance to the south, burying the great stairway. The south and east walls of this chamber have been merely dotted in on the plan for reasons to be explained later.

Returning to the point where the church pavement had first been struck, we pushed north to the internal north-west angle of the building, but at a distance of 15 feet from the corner the stone flagging gave place to a patterned mosaic. It is curious that there is no corresponding bit of mosaic in the south-west angle. The west wall was thus traced from corner to corner on its inside, but no door was found in it. This is explained by the rapid rise of the rock to the west. This lack of a doorway also helps the view that a wall ran along the top of the scarp a few feet to the west. In any case, a main north entrance would have been more convenient for those approaching from the city. This north entrance was actually found later.

In the meantime, striking in at the right spot, we had found the exterior north-west angle of the building. We pushed eastwards along a pavement some 10 feet higher than the floor of the church, and, at a distance of 19 feet, we came upon a wall running north from the wall that we were tracing. The pavement was traced for some distance north. Pushing eastwards over the top of this wall, and finding no pavement, at the same level, on the other side, we sank a shaft in the tunnel down along the face of a pier, apparently terminating the north wall of the church at this point, striking what appeared to be a paving stone, some 40 inches above the level of the church flooring as ascertained before. This paving stone, however, was soon shown to be the top of a step, with an 8-inch rise, and pushing south we followed down five steps, coming then on to a mosaic which thus turned out to be at the exact level of the flooring of the building. The pier still stands to its full height, and fortunately the cornice is preserved. It was supposed to be the side of a door and was thus marked in the last plan. To find the other side was


atrium
stone pavement
narthex
stone pavt
6 step
aisle
mosaic
pavement
Chapel
nave
mosaic
pavement
choir
marble pavt
apse
stone pavt
aisle
mosaic
pavement
Present Pool
Church
discovered by
Pool of Siloam
Ground Plan.
Section C.D.
Section A.B.
Level of pool pavement
Scale
Feet
Surveyed by J. J. Blair.
Mapped & drawn by Alex. Co Dickie

impossible without another shaft. We had passed underground from the property of one man to a point under the gully which was formerly a road but is now used as the open drain of the city, and which bounds the land of another proprietor. These fellahîn give us *carte blanche* to work in their lands (for a proper compensation !), but no man will let us penetrate an inch into his property if we approach it subterraneously from the land of another, for these stones which may rightfully belong to him will emerge into the open air from the shaft in the field of his neighbour, who will set up a counter claim. Accordingly, we sank a new shaft at the point where we expected the other side of the door, and came right down upon the steps and also upon what we supposed to be the corresponding door-pier. Further investigation, however, showed this to be an isolated pier, about square, set back 1½ inches from the lowest step. Its original south face was 2 feet 6 inches broad, but it had been strengthened by an additional pier 30 inches broad. The two periods are clearly shown by the straight joint between them and by the fact that whereas the tread of the fourth step from the bottom is broadened to join the back of the original pier, such is not the case with the addition (*see* plan). We then pushed a tunnel eastwards on the mosaic flooring, keeping in view the two lowest steps, and 7 feet 4 inches from the first isolated pier we came upon a second, consisting of a monolith to the height seen, which was 40 inches. At a distance of 7 feet 2 inches from this another was found. By this time it was clear that we were working along an arcade, and the discovery of three more piers confirmed the idea. A little beyond the last of these the border of the mosaic turned south, and we soon found the corner pier and the end of the steps. Turning east we followed along a step (7 inches high) till we came upon another pier and a stone step running south, giving the breadth of this arcaded north aisle of the church. The northern step leads to a chapel railed off in a manner to be described elsewhere. The floor of the chapel is of stone flagging.

The length of the arcade is 64 feet. A glance at section CD will show how rough the construction is. The inter-columnar spacing is irregular, with an extreme variation of 3½ inches, and in the breadths of the piers there is a maximum variation of 5 inches. These are built of stones set in lime roughly dressed with the comb-pick, except the monolith, which is chisel-picked. From the irregularity of the courses one would gather that they had been plastered like the rest of the church. The two bottom steps leading down to the arcade were traced along its whole length. The six lower steps were seen in the shaft, and the six higher ones in a tunnel at another level. Measurements between allow for four more, making 16 in all. It is not impossible that an extensive excavation might reveal the whole stairway still preserved.

The pavement of the atrium and the westernmost of its three doors had been seen last season in a shaft which we sank in search for the city wall, but at that time these had no meaning for us. However, when we followed up the steps, crossed the pavement of the narthex, and broke

through its wall at the north-west corner we found ourselves on this same pavement, and were able to see its connection.

The south wall of the atrium was traced for its entire length, and three blocked-up doorways were found in it. On removing the blockage we observed curious grooves on the outside sills and jambs. The sockets indicate that the doors were double. Opposite the central doorway were found two columns. In the joint between the shaft and the base is a heavy lead bedding, the shaft being merely set on the bed, without joggles or other fixing. The entire shaft of one is still standing, its top being 7 feet 9 inches above the pavement, and only 5 feet under the surface. At the east of the atrium were found offsets from the door-piers, 20 inches high, which were evidently used as benches. Against the west pier of the central doorway we have dotted in on the plan another bench or seat, as a rough portion in the otherwise smooth masonry (here ruined down to one course) corresponds exactly in position to the bench against the east pier, which has also rough masonry behind it. In the east wall several courses are still standing. These continue west in the north wall for about 4 feet, where it is ruined down to the bed of the first course above the pavement. This low course continues to the point indicated on the plan, where it is ruined completely, though the pavement continues. Ten feet beyond in the same line is a rough wall, evidently of the period of the filling in of the doorways. No sign of the doorway which must have existed in the line of the north wall remains, though careful search was made. The atrium must have had a west wall, but its place is now occupied by the huge blockage of masonry, which thus probably represents a later period. We have seen before how this same blockage had also obliterated all signs of approach to the great stairway. Builders are unfortunately not properly considerate of the unborn excavator.

The excavation of the apse and choir was a somewhat anxious affair, as so many features in a very limited area had to be sought for by tunnelling. The fear was that by following a false clue we might render it impossible to tunnel in the vicinity. As it was, we were obliged to fill up some places immediately after the remains were measured, so that we could go on with safety. The plan shows that a wall separates the choir from the north aisle, with two steps leading up to the choir through an opening. The discovery of the apse, with its five steps, was a great relief, as it was the first sure proof that we had found an ancient church. The southern half of the apse was seen in a shallow cutting made at the base of the terrace, and connection being made with the former tunnel, the ventilation was vastly improved. Access to the church was rendered only too easy, and a guard had to be stationed at the spot on Sundays to prevent the entrance of people whose curiosity might have lead them to pull stones out of the tunnel roof. The soil here being so slight the south wall of the choir is gone except one stone. The white marble pavement, partly set in geometrical pattern, is fairly well preserved. A wall was found showing the existence of a chamber to the south of the apse. This had been used at a later period, as proved by walls butting up against it.

Signs of a painted pattern were found on the plaster of the choir wall.

The north wall of the choir is built *on* the step, 29 inches broad and 3 inches high, which is thus proved to belong to an earlier period. We followed this in a tunnel parallel to that which had revealed the piers of the arcade, and separated from the latter by a pier of earth only 5 feet thick. Fortunately the soil was very firm, no boxing being required. On reaching the exterior north-west corner of the choir, we drove a tunnel to the south, soon finding the two steps leading up to the choir, and two small column bases at the entrance. Between the two columns (the mouldings of whose bases are dissimilar) is a 3-inch sinking in the choir floor, measuring 3 feet 2 inches by 2 feet 8 inches. Desirous of examining the east and west central axis of the choir, in hopes of finding the position of the high altar, we drove a tunnel east as far as seemed prudent, working from that direction, and then working back from the tunnel in front of the apse, we made the connection, coming upon a stone slab set in the marble pavement. Before we could safely examine the limits of this, the first tunnel had to be filled up. This stone is 6 feet 3 inches long by 3 feet 2 inches broad, and a ¾-inch sinking was found in the angle. It occurs exactly in the position for the high altar, which doubtless once stood upon it.

In the angle of the pier north of the apse, another interesting discovery was made. At this point the marble flooring was ruined. Let into the angle was found a sunk box, with sides and bottom formed of red stone slabs varying in thickness from ¾ inch to 3 inches. Its bottom rests on 4 inches of earth, burying the pavement in use before the choir wall was built, hence it belongs to the second period of the church. The internal measurements are 23 inches by 8 inches, the depth being 16 inches. The top is entirely gone and nothing was found in it. It reminds us of a discovery we made two years ago of a box sunk under the centre of the apse in the church found on the Mount of Olives. The objects found in this latter box are figured on p. 104 of the *Quarterly* for April, 1895. We decided that this was used for a reliquary; accordingly we may assume that the box found in the Siloam Church was used for the same purpose. The difference in the position of the two boxes should be noticed.

In the meantime we had been continuing our tunnel west for 40 feet from the north-west exterior angle of the choir, and had come upon the two great piers built upon the stone step, hence evidently belonging to the later period of the church. These were puzzling at the time, while the dwarf wall running between them is still unexplained.

The aisle mosaic and the stone step separating the aisle from the nave continued the whole length of our tunnel. The step, however, does not extend to the west wall of the church, and the mosaic at the north-west angle is of an entirely different pattern. I am sorry that these discrepancies were not explained, but at first we had expected to recover only the main outlines of the church, and it was not till the excavations were finished that we were aware how completely the remains fitted

together to form a coherent plan. Certain details were, however, wanting; some of these could no longer be supplied, as we had been forced to close up certain tunnels as the work proceeded, and others could be no longer sought for owing to the lateness of the season. For example, further excavation at the west end of the church is now rendered impossible by the rains, as it is under an open drain down which a torrent of water pours, rendering further tunnelling unsafe.

At the south part of the church, the soil being slight, the work was mainly carried on in an open trench. In this was seen the termination of the steps leading to the choir. Through the kindness of Mr. Charles Hornstein we were able to obtain a photograph of the mosaic of the nave. It has the "scale pattern" enclosed in a border, and is similar to the mosaic of the north aisle. The stone step separating the nave from the south aisle was also traced to the point indicated on the plan. On it were found the two piers corresponding to those on the other step. These had at first appeared to be without meaning, but when the two others were found, it became plain that they had been built at a later period to carry a dome. The east wall of the church appears to be completely destroyed, but sure proof of the south aisle was given by the mosaic, still *in situ* but much broken, to the south of the south-west pier.

Various column bases and bits of moulding were found among the *débris*; these, with the ornamentation still *in situ*, will be drawn later on.

Such then are the details of the church we have discovered at the Pool of Siloam, but there remains to us the interesting query as to whether this church is historic or not. The Pool of Siloam is mentioned by the Bordeaux pilgrim (A.D. 333) as having a four-sided portico, but he makes no mention of a church. Antoninus Martyr (A.D. 560–570) describes a church over the pool. Arculfus (A.D. 670), however, who makes a speciality of the description of churches, is silent in regard to the church at the pool. Accordingly we assume that the church mentioned by Antoninus was built after 333, and destroyed before 670. To assign a builder to it is not difficult. The Empress Eudocia, who died in May, 460, spent the last 10 or 11 years of her life in Jerusalem, where she had been exiled by her weak and jealous husband, the Emperor Theodosius. She employed her time in building numerous churches (notably the Church of St. Stephen, whose restoration is now being rapidly accomplished by the Dominicans), in erecting an Episcopal Palace, and establishing asylums for the poor and aged. Antoninus states that "the fountain of Siloa is now within the walls of the city, because the Empress Eudocia herself added these walls to the city." Though he does not state who built the church, it is not very far-fetched to assume that Eudocia's reason for extending the city walls to include the pool within the city was to protect a church she had built at that point.

Antoninus's description is as follows[1]:—"Cap. xxiv. Exinde venimus

[1] Edition of Tobler and Molinier, Geneva, 1879.

ad arcum, relic antiqua porta fuit civitatis. In ipso loco sunt aquæ putride, in quas missus est Jeremias propheta. Ab arcu illo descendentes ad fontem Siloam per gradus multos, vidimus basilicam volubilem, subtus de qua surgit Siloe: que habet solia duo ex marmore manu hominis facta: inter solium et solium clausura cancellarum; in uno pro benedictione larantur viri et in alio mulieres. In quibis apus multe virtutes astendentur, imo et leprasi mundantur. Ante atrium est piscuia grandis, in qua populus lavatur assidue; nam solis certis horis fons ipse irrigat aquas multas, que descendunt per vallem Gethsemane, que et Josaphat vocatur, usque ad Jordanem in loco, relic deficit in mare Salinarum subtus Sodomam et Gomorrham." The translation is as follows:—"Thence[1] we came to an arch where was an ancient gate of the city. At that place was the putrid water into which the prophet Jeremiah was sent. Descending from that arch to the fountain of Siloam by many steps we saw the round (?) basilica from under which Siloam rises, which has two baths made by the hands of men out of marble; between the two baths runs a partition, in the one men, in the other women, bathe for a blessing. In these waters many cures are effected, and even lepers are cleansed. Before the atrium is a large pool made by the hands of man, in which the people bathe continually, for at certain hours the fountain of its own accord pours forth much water, which runs down through the Valley of Gethsemane, which is also called Jasophat, as far as the Jordan, and enters the Jordan at the place where it runs into the Salt Sea below Sodom and Gomorrha."

My translation is based upon that of Mr. Aubrey Stuart, the editor of "Antoninus Martyr," in the Pilgrims' Text Series, but in his desire to render bad Latin into good English, he has fallen into one or two errors, if we assume that the church that we have just discovered and the church that Antoninus describes are the same. Our Latin author writes: "Vidimus basilicam volubilem, subtus de qua surget Siloe: que habet solia duo," &c. Mr. Stuart, evidently with a laudable desire to avoid two awkward relative clauses, assumes that both relatives refer to the church, notwithstanding the absence of an *and*, places a period after the first clause, and begins a new sentence thus: "The church has two baths." I prefer to read the Latin as it is written. "We saw a round (?) basilica under which Siloa rises which has two baths." The only difficulty here is in making the word Siloa apply to both the fountain and the pool, but this is not great, and the excavations bear out the literal translation. The plan will show that no signs of baths were found within the church itself, and its height above the pool of almost 27 feet make such an arrangement quite impracticable. We would naturally expect to find the baths in the pool, and such has been the case. The portico we have found about the pool is an ordinary Roman bath arrangement, though its inclusion in the limits of the bath itself is unusual. The excavations were not carried on sufficiently to reveal the division between the

[1] He has just been describing the Church of St. Mary's within the Temple Area.

men's and women's apartments. The hard and well-polished Mizzeh stone of the division wall bounding the channel might well be described as marble.

In the sentence describing the large pool in which the people bathe, and which is said to be "before the atrium," Mr. Stuart supplies a word, writing, "before the atrium of the church." Now the atrium of the church that we have discovered is to the north, and its floor is 10 feet higher than the level of the church itself. The space before it (*i.e.*, to the north) is quite unsuited, both by position and level, for a bath. Antoninus, we have assumed, has just been speaking of baths within the pool. He then refers to "the atrium." If we assume that he means an atrium of the pool, his meaning becomes clear. For south of the pool we have an extensive court, with steps leading down to it from the south, and with indications of a colonnade. Assuming this court to be the atrium he refers to, the pool where the people bathed is to be looked for to the south. Well, immediately to the south is the great "Old Pool," the dam wall of which is still standing, while the scarp we have followed at its western side was certainly formed by the hands of men.

We may now study the text a little further, and notice the correspondence of our church with the description of Antoninus. Leaving the Temple Area, probably the Double Gate, as suggested by Mr. Stuart, he descended by many steps to the church. The paved road—apparently Roman—which we uncovered to the north of the pool, points almost in a straight line to the Double Gate. It is stepped down about every 18 feet, and thus "many steps" would occur along its whole length. Siloa, he says, rises beneath the church. Not only does the north aisle of our church extend above the roof of the arcade, but the Siloam Tunnel passes directly under the stone of the High Altar, which was usually placed above a sacred spot. It was the healing properties of these waters that made the place sacred, and led to the construction of the church. It seems probable that the connection with the Virgin's Fountain was unknown, and that the builders of the church believed the source to be near the mouth of the tunnel. Antoninus, at least, held this view.

Our author uses the word "volubilis" to describe the church. The meaning of this late Latin word has been lost, but the various suggestions of *splendid*, *vaulted*, and *round* have been made. The latter, made by Mr. Stuart, may be the correct one, and the word may refer to the dome, which our excavations have undoubtedly proved to have existed at the second period of the church. If Justinian added this dome to the church, as will be suggested in the architectural notes, then it would have been a prominent feature at the time of our pilgrim's visit.

The question now arises: How was the pool approached from the church? As the church extends over the pool, its flooring being 26 feet 7 inches higher than the pool pavement, the descent must have been along

either the east or west side of the pool, the direct approach being from the south. A study of the relative position and levels of the church, the great stair and the pool on the plan and section GH, suggests an answer to the question. The upper part of the stairway was destroyed on the east when the church was built, as the whole floor of the nave is lower than the level of the steps at this point. When we reach, however, the place for the now destroyed south wall of the south aisle, a broad step of the stairway seen at this point is 3 feet below the level of the mosaic, still *in situ*, and four steps with narrow treads could easily have lead from an opening in the aisle, near the south-west corner of the church down on to this broad step, and from that point the stairway could have been utilised, the approach being as formerly from the south. As this stairway is to this day in such excellent preservation, and as it must have been seen in the course of the construction of the church, it seems most reasonable to suppose that advantage would have been taken of it by the builders of a church, whose very reason for existence was the sacred Pool of Siloam. The present remains furnish at first sight an objection to this theory. In order to entertain it, we must assume that the small chamber with white mosaic flooring belongs to a later period, as it stands in the way of an access to the stairway. Accordingly its walls have been simply dotted in. That parts of the church seem to have been used at a later period for some other purposes seems to be indicated by the blocking up of the doors of the atrium, by the rough wall built at its north, and by the chambers built against the wall to the south of the apse. This blocking up of the atrium would leave no approach to the church, as such, for there is no door in the west wall. Hence this small mosaic chamber may belong to the later period, together with the extension of the west wall towards the south in a rougher style of building. If we reject this theory, the only alternative is that the pool was approached by a stairway from the south-east angle of the church. But why build a stairway to the east of the pool when so fine an approach was known to exist to the west?

During the present season the number of workmen has attained the high average of last season. The filling up of tunnels has taken much labour, and especial care had to be exercised in packing those that extended under the open drain. Most of these were closed before the rains, but one remained open, and the pressure of the rushing water created a shaft from the surface which was more than 20 feet above the top of the tunnel. The earth thus washed down helped to fill our tunnel, and the shaft was easily filled in from the top. Notwithstanding the extent to which the ground has been honeycombed, not an accident has occurred in our many tunnels. A touch of comedy has been added to our relations with the landowners by a grim Siloam lady, who lays claim to a large part of the territory in which we have been excavating, and who declares the owner with whom we have negotiated to be a usurper. She appears periodically on a Monday morning and tries to stop the work, sometimes going to the extent of threatening to throw herself down

the shafts. The transfer of a silver coin, however, temporarily appeases her.

The hot weather continued very late, and the Tyropœon Valley became more and more unendurable till the rains set in. Both Mr. Dickie and myself were obliged to leave Jerusalem for a short time, but fortunately our periods of indisposition did not coincide, and the work was uninterrupted. Even during several days of rain the work of filling up tunnels went on.

A pleasant incident of the season was the fiftieth anniversary of Herr Schick's life and labours in Jerusalem. In honour of the event the University of Tübingen conferred upon him the degree of Doctor of Philosophy, *honoris causâ*. The German community met at his house, and a service was held and addresses given. Other friends called afterwards, and all were rejoiced to congratulate Dr. Schick and his wife, not only on their excellent health, but on the wonderful work this able archæologist has accomplished in the Holy City.

Jerusalem, *December* 15*th*, 1896.

ARCHITECTURAL NOTES ON REMAINS OF ANCIENT CHURCH AT POOL OF SILOAM.

By Archibald C. Dickie, A.R.I.B.A.

Those interested in the history and development of early Christian church architecture will find this example to be worthy of special study. Early architects seem to have been so generally favoured with a comparatively "free hand" in their work, that it is of rare occurrence to find their ingenuity taxed to surmount the many difficulties involved in dealing with a contracted site. Here we have a site bounded on the south by the Pool of Siloam, on the west by a scarp and probable wall, on the north by an unlimited but rapidly rising surface, and on the east by the position of the conduit which conveyed the water to the pool.

The then existing north wall and arcade of the pool supplied a ready bearing for the nave, arcade, and south wall of the church, the desire evidently being to place as much of it as possible over the pool. As the healing waters of the pool were the sacred element in connection with this church, the high altar—which in usual cases was placed over the remains of the departed saint to whom the church was dedicated—in this instance stood over the point from which the holy waters flowed unpolluted into the open pool. Thus the eastern limit of the church was defined, and this so awkwardly that the scarp and probable wall to the west completely shut off the western access, the necessity for including the steps in order to reach them from the church—as the only available descent to the pool—forcing the architect to draw the west wall to within a few feet of the

scarp. Consequently, the only practicable point of access was from the north, and although the rapid rise of the ground rendered this difficult, necessity demanded it, hence the unique arrangement of the church accessories, which were so essentially a part of the design. An enclosure resembling an atrium was placed at the extreme north, the entrances to which have, however, not been recovered. Against the piers between the three doors in the south wall, low stone-built benches occur, which were in all probability used as seats for those whose initiation had been incomplete and who were consequently prohibited from entering further into the sacred precincts. In front of the middle door to the narthex are two pillars, the remains of some central feature added to give prominence to this entrance. The compartment marked narthex on plan might in this instance more properly be called an inner portico introduced to meet the exigencies of the rapidly falling ground to the south, more for the purpose of a staircase than for any other motive. The stairway which extends almost the whole length of the church, descends to the north aisle through an arcade of seven arches carried on square piers, quite a unique arrangement. A glance at the plan will show that the original internal form of the church has been destroyed by a later alteration, the parts of which are shown by "hatching," in distinction from the blackened parts. The slightly raised step on a stone foundation, seen for the whole length of the arcade, and continuing unbroken under the later walls and piers, is satisfactory indication of the original nave (terminating in a stepped apse) and two aisles, and although the later alteration has removed all traces of the nave arcade, the columns must have rested on this foundation. Thus on the stepped apse (now in the east end), the atrium, and the narthex all the characteristic features of the early Christian adaptation of the Basilican plan are retained in a more or less modified form. The history of the stepped apse illustrates an interesting instance of an adaptation—to an early Christian form of service—evolved from pagan sources. When—under Constantine—Christians were free to worship openly, the Great Judgment Halls of the Romans were at once seized upon as the most suitable buildings in which to worship, and were accordingly taken as the type of the first Christian church. The apse was used by the Romans as a tribunal, and the seats arranged in tiers around the semi-circle, the presiding judge having his seat in the centre at a higher elevation than the side seats, which were occupied by the minor members of the tribune. This arrangement was particularly suitable for the Christian form of service of the time, and was consequently adopted, the seat of the presiding judge becoming the throne of the bishop, and the seats of the minor judges becoming those of the minor clergy. The altar, which in Roman times was placed in front of the chief judge and was used for taking the oath, retained its position in the Christian Church in front of the bishop. In this church, however, the steps of the apse are so exceedingly narrow and low (10-inch risers and 10-inch heads) that it is doubtful whether they were ever used as seats, and are suspiciously suggestive of the architectural retention of a

feature the original meaning of which had either been forgotten or ignored.

Unfortunately the bases of the nave arcade columns have all been removed, and their positions so completely lost that it is impossible to give the exact reconstruction, but there is little doubt that they took the form of the ordinary Basilican arcading, viz., an arcade carried on circular columns supporting a gallery and higher arcade, the whole breadth of nave and aisles being covered with a simple sloping wooden roof. However, considering the unusual peculiarities of the general planning, and knowing that the raised bearing of the colonnade did not butt against the west wall, it is possible that the aisle may have continued round the west end, the absence of an entrance in the west wall allowing of, and, in fact, suggesting, such a deviation from precedent. The interior western termination of both periods can only, however, be conjectured, as the excavation of that part has disclosed no clue.

I now come to the later alteration, viz., the choir and the four great piers in the nave. The fact that a lower and earlier floor of the choir exists, and that the step and pavement extend under the walls and piers, is sufficient proof that these latter constructions have been set on the original floor at a later date. Besides, this arrangement is entirely out of date with the Basilican plan and plainly shows a later feature introduced incongruously into a distinct type of earlier church. The large proportion of the piers (4 feet 3 inches square), the width of the intercolumnar spaces (20 feet), and the position of the piers in the angles of a perfect square, make it quite evident that they supported a dome. This style of dome construction, viz., four piers in the angles of a square supporting four connecting arches which carry a circular dome with pendentives, dates from the time of Justinian. It is the invention of the Byzantines, and is the leading characteristic of their architecture, and might well have been seen by Antoninus Martyr—560 to 570 A.D.—when he visited Jerusalem. Structural provision to resist the immense thrust of these large supporting arches can be seen in the enlarged piers at the angles of the choir enclosure, and the later addition to the westernmost isolated pier of the stair arcade. The position of the choir extending well into the nave also indicates a later development.

North of the apse is a small cell marked chapel. Its floor is raised 9 inches above the aisle floor, and in the sill is cut a 3 inches wide by 3 inches deep groove, which also continues for 15 inches up the side piers, and in the south pier a fragment of a polished redstone slab is inserted into the groove. Here were also found the remains of stone standards, one of which was entire and measures $8\frac{1}{2}$ inches square and 3 feet high, having a shallow moulding worked on one face, and in one side a sunk groove similar to that found in the step and piers; the head of this standard is finished by a rudely worked ball ornament. These apparently are the remains of a low enclosure, railing the cell off from the aisle, the redstone slabs being let into the standards on either side of the central entrance. The quantity of the remains seems to indicate that a coping

similar in design to the standards ran along the top of the redstone slab.

It is impossible to give an adequate idea of the character of the mouldings and other carving without detailed drawings, but these will be furnished later. The mouldings found—*in situ*—belonging to the earlier church are :—The cap of the antæ pier of the stair colonnade (*see* section CD), and the base mould of the south pier of the chapel entrance which extends behind the later pier, added at that point as shown on plan. Both of these examples are similar in character, shallow unstudied copies of classic work, as rude in execution as they are weak in design. The column bases—*in situ*—at the entrance to the choir and in the atrium are equally rude and class with the general bad workmanship of the whole building. Three large column bases and one carved cap were found within the body of the church—not *in situ*. The base moulds are of a much finer class than those I have just described, they are well worked and are late imitations of the attic base so commonly used in this country even in the time of the Crusaders. The cap is of the same character and is a debased imitation of a Roman Corinthian cap possibly stolen from some earlier structure. None of these mouldings and carvings, except the large column bases, are such as might be expected from an erection by Justinian.

Jerusalem, *December* 15*th*, 1896.

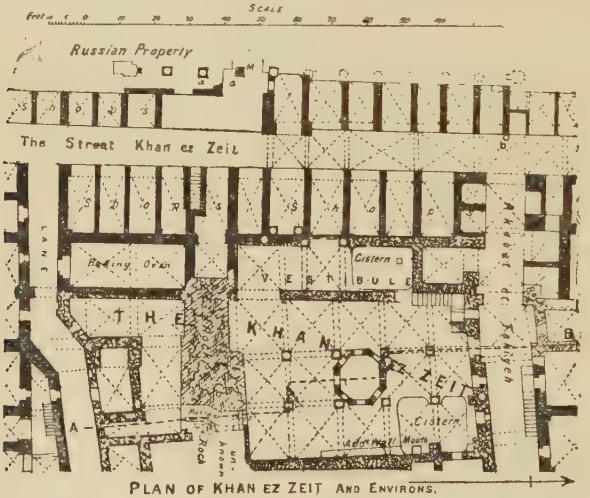
KHAN EZ ZEIT.

By Dr. Conrad Schick.

The Calvary question demands a great part of the time I can give to such matters. The many visitors who come to me, asking information or to see my models, generally bring also the Calvary question forward. When for an hour, or even more, I have been explaining the models, they say at the end : "Please, now only one more question : What do you think of the new Calvary ?" which opens a new field, with many things to be said *pro* and *contra* as to both Calvaries, that is the *new* one and the *old* one, or the Church of the Holy Sepulchre. So in order to simplify matters, I resolved to make a model of the site of the said church ; as it had been in ancient times, and for the tourist is no more visible, viz., that there was a large rocky eminence, or platform, as I have pointed out already on some former occasions (*see Quarterly Statement*, 1890, p. 20, and 1887, p. 154, *et seq.*). So when shown this rocky height in a model they would get a better idea of the locality, and save me much explanation. In order to do this well, I examined once more the whole neighbourhood of the church, and also the *Khan ez Zeit* situated east of it. I had known for a long time that there are pillars there, but thought

them to be simply old broken materials, used again when the Khan was built. Now, by going more into the details I found the site much more interesting than I had formerly supposed.

The khan is actually a large Hall with four aisles, each of five yokes, or arches, and vaulted with 20 cross archings, supported, besides the outside walls round about, in the inner with a wall and two rows of four pillars (*see* plan). The point of the springing of the arches from the top of the capitals of the pillars is now only about $2\frac{1}{2}$ to 3 feet above the present main level of the flooring. As there are two cisterns having now very little water in them, we let down by a rope a man to ascertain the size and depth, &c. The depth was found to be 15 feet, and the neighbouring pillar ascertained to have its base at the bottom of the cistern, but as it is plastered no mouldings could be seen on it. As there



PLAN OF KHAN EZ ZEIT AND ENVIRONS.

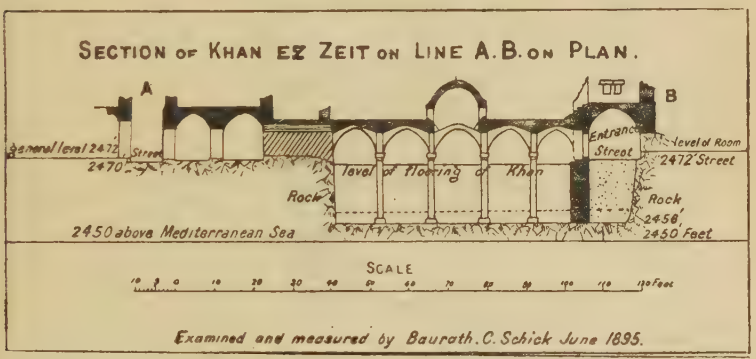
is by the west wall another cistern, which proved to be nearly the same depth, it is clear that the pillars, with their bases, stand 14 or 15 feet underground, and the space is filled up with these two cisterns and with other smaller ones, not for water but for oil, as for a time there was a soap manufactory here, and with earth and dung from horses and donkeys kept here, which was never removed. But what was most striking to me was to find that the whole is sunk into the rock, like a kind of pool, as round about the rock is either very near to the surface of the streets, or even rising several feet higher. In the street on the north it rises on the north side 6 feet high, and at the south end of this sunken ground (or pool) even a little higher, forming there a rock embankment, through which a passage $18\frac{1}{2}$ feet long is cut,[1] as shown in the plan. The western part of this passage (which is not straight, but crooked) is entirely rock,

[1] Some rock steps lead up to it.

the eastern part chiefly masonry. The passage is covered with a low tunnel arch of common stones.

On the west wall of this great Hall there are two more pillars, and outside of it, in one of the shops, are another pair of pillars, but put nearer together than those of the Hall. The capitals of all these pillars are, with a few exceptions, alike, worked out of red mizzeh stone, without any foliage, simply a kind of cube, on which the sides of the upper part is ornamented with horizontal mouldings, and the lower part with rounded mouldings, beginning with a large round ogee (not square, but round shaped), with some other additions, as the figure shows. The abacus is 2 feet broad each side, and the shafts 1 foot 7½ inches in diameter.

As there are windows (three) only on the north side, of which one opens into the covered street, and all are near the ground, the Hall would be rather dark, if there was not towards the centre an opening in the roof, with an eight-sided tambour, having small windows round about, and covered with a small dome, so when the sun shines there is

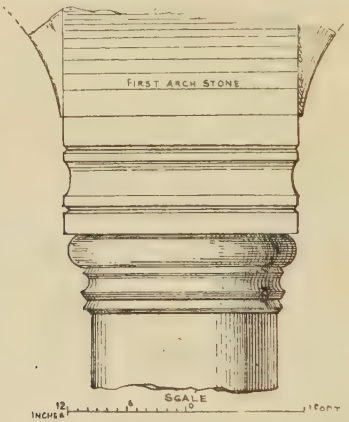


in the centre and the northern part some light, but in the west, behind the wall, and in the south, beyond the rock embankment, it is entirely dark, even at noontime. Near the north-west corner of the Hall there is a staircase leading up to its roof and to some buildings erected over it, and in the neighbourhood.

Seeing this pillar, one is inclined to think this building may have been a church, but I found nothing to justify such an idea. The more I consider the matter, the more I become convinced that there was here a Market Hall, and that it was originally built for such. The deepening (or pool) was of course already there at the time of the erection of the present building, on which I could not see any alterations or restorations, except that the walling-up of the shops in front of it on the west was done in a later time, and at the east wall an additional wall was made, of about 23 feet long, for a support to build a house upon (*see* plan).

The quarrying of this deep and large place was done apparently in

the Jewish time, and belonged to ancient Jerusalem (being inside the second wall). Most likely it was then a pool for water,[1] collected there, and for the use of the people residing in this fortified elevated place—which I consider to have been one of the Akras, if not *the* Akra. If they had wished to cover it up, they could have done this best and most easily by making square piers, and not pillars. So in finding these pillars, I think the covering was done at some later time, and not for keeping water, but for creating a covered Market Hall. When putting into it some walls a public road was made on its north and west sides and a kind of vestibule formed, covered perhaps only as far as the pillars go. In the corner a separate shop or office was made, and close to it a cistern in the open air. The chief entrance to this Market Hall would have been at that time on the western side, with a broad flight of steps, and the two outer pillars belonged to the chief gate of the vestibule.



CAPITAL OF PILLAR AT KHAN EZ ZEIT.

It is remarkable that in the west opposite stood once the Basilica of Constantine. Of its propylæum three pillars[2] are still standing on the Russian ground. One pillar (marked *a* on the plan) I saw 40 years ago, but it was removed when the opening M was made there. I found that Constantine's propylæum must have had 10 pillars,[3] which I have shown in the plan by dots. Eusebius speaks of a Market place east of the propylæum, which was certainly of some extent. Now from the plan one can easily see that from the propylæum pillars to the pillars of the vestibule of the Market Hall there was a free space of 45 feet

[1] About 80 feet long, 60 feet wide, and 20 feet deep.

[2] One stands in the wall of the first shop.

[3] *See* "Zeitschrift des Deutschen Pal. Vereins," 1885, Plate XI. *Cf.* also Professor Hayter Lewis, "Introduction to the Churches of Constantine at Jerusalem," Palestine Pilgrims' Text Society, 1891, pp. xi-xxix, and Sir Charles Wilson's plan, p. 34.

wide, and three times as long, or 135 feet from one road to the other. This "Market place" was nicely paved—a piece of the pavement was found when the Russians cleared their property. It is now occupied by the main street and the row of shops on each side.

I may add that the basement of one of the pillars, marked *a*, is hewn out from the solid rock, and the flooring there is rock well smoothed, like a pavement.

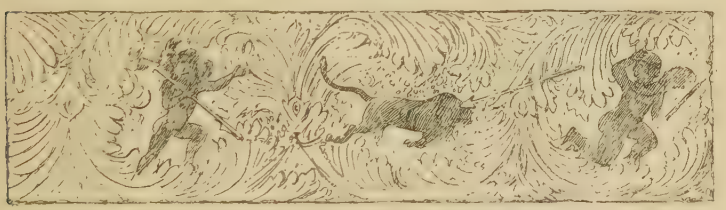
This Market Hall was not built by the Crusaders; it is, I think, anterior, and must have stood when Constantine's Basilica was built, although the arches are to some degree pointed.

I have to add, that in the street Khan ez Zeit, on its west side, at one of the shops, stands also a pillar, *b*, which has lost its capital. I have an impression that the paved market place was perhaps bounded there by a colonnade, in a line as shown by red dots.

REMARKABLE SCULPTURE AT MEJDEL.

By Rev. J. E. Hanauer.

Whilst itinerating lately amongst the Jewish colonies in Philistia, I stopped for the night of May 25th at the town of Mejdel, situated about 2 miles from the ruins of Ascalon. There being no hotel in the place, my companions and I knocked for admission at the door of a stone house, which was pointed out to us as rented by the English C.M.S. missionaries working at Gaza, and occupied by a dispensary.



Sketch of Sculpture from Ascalon built into a House at Mejdel.
Observed May 25th, 1896. *J. E. Hanauer.*

Whilst awaiting the arrival of the native caretaker I noticed, built into the wall over the house door, and at the height of from 10 to 12 feet from the ground, a white marble stone 0·73 centimetre long and 0·33 high. Sculptured upon it in very low relief was a striking picture which I at once sketched, and of which I send you two squeezes. The carving is divided into three sections or circular panels surrounded

by conventionally represented foliage, evidently intended to indicate forest or thicket scenery. I was told by several of the bystanders that the bas-relief had been found at Ascalon. I will now endeavour to describe it.

In the *first* section, beginning at the left, is seen the figure of a hunter of great muscular development and strength striding along. His beardless face is looking backward, and his left arm is outstretched as if urging others to follow him. His face is given in profile, only the nose and eyes being depicted and not the mouth. It is the same in the case of the other figures. With the exception of the characteristic Egyptian head-dress (so often seen in pictures of monuments in the land of the Nile), and a short cloak or chlamys fastened round his neck and fluttering in three folds over and behind his right shoulder, he is perfectly nude. He carries a live goat, gazelle, or antelope, the head and horns of which are seen over his right shoulder, and the hindquarters over his left. His right arm is bent, and the hand grasps a short but thick and ponderous spear or javelin (*pilum*[1] or ὑσσός) remarkable for its small[2] and broad barbed head, which points upward over the right shoulder of the hunter.

The *second* section, or panel, in the middle of the sculpture, contains the figure of a huge human-headed lion, or sphinx, with Egyptian head-dress and amiable-looking feminine features. The face is looking backward. Here, also, the mouth is not indicated. A barbed javelin, like that carried by the figure in the first section, has been struck into the head of this creature, but the spear-head is only half embedded in the wound. The short, thick spear-shaft slopes upward from the head, and passes through the foliage into the third *panel*. It is evident that it has just left the still uplifted hand of the human figure represented in this section as crouching or kneeling upon its right knee. The Egyptian head-dress, the beardless features, and the short cloak fastened round the neck, but (in this case in order to give symmetry to the design) fluttering above and behind the *left* shoulder, enable us to identify this figure with that of the individual represented in the first panel. His left hand holds what may be taken either for a sword or for the shaft of a second javelin. It was usual for soldiers to carry two such (Polybius vi, 23[1]). The outlines of the carving are very shallow, and it is therefore very difficult to obtain a good squeeze, or even, because of the very small amount of shadow, a photograph of the sculpture. In order to give greater vividness to the picture, and to compensate for the very low relief, the foliage is not only carved, but also painted a light green, the contrast between which and the white of the living figures (which are drawn in a very spirited style) is very striking. A crack runs through the stone just behind the

[1] "Smith's Dictionary of Greek and Roman Antiquities." Article "Hasta."

[2] The heads of Roman *pila* extended often half way down the shaft, therefore those in the sculpture are comparatively small.

head of the sphinx, whose features, though more feminine, have a family likeness with those of the two other figures.

The sculpture is, I venture to think, Greco-Egyptian in character. The Greek element is indicated by the animated drawing of the figures, and especially of the sphinx. We are told by the writer of the article "Sphinx," in "Smith's Dictionary of Greek and Roman Biography and Mythology,[1]" that "The Egyptian Sphinx is the figure of an unwinged lion *in a lying attitude*" (the italics are mine), "but the upper part of the body is human. . . . . The common idea of a Greek Sphinx, on the other hand, is that of a *winged* body of a lion, having the breast and upper part of a woman. Greek Sphinxes, moreover, *are not always* represented in a lying attitude, but appear in different positions, as it might suit the fancy of the sculptor or poet."

If so, then the Mejdel Sphinx, being neither *winged* nor *recumbent*, may possibly be assigned to a middle position between Egyptian and Greek Sphinxes. This, however, is a question which I must leave to others to determine.

A JOURNEY TO PETRA—1896.

By Gray Hill, Esq.

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In the *Quarterly Statement* for January, 1896, I gave an account of an unsuccessful attempt (the fourth) made by my wife and myself in the spring of 1895 to reach Petra from the north. In our fifth attempt, made in the spring of 1896, we were completely successful; but the difficulties had faded away. Perhaps we may claim the merit of perseverance, but if there had not been a change in the condition of the country lying between Jerusalem and Petra I am afraid that perseverance would not have been sufficient for the purpose. Our attempts made in 1890, 1891, and 1893 were foiled because of the dangerous state of the country in those years, and the fighting going on amongst the tribes on the road; and that in 1895 because the Mutesserif of Kerâk stopped our progress at that place for want of an order from Constantinople allowing us to visit Petra.

The military posts now established by the Turkish Government at Mâdeba, Kerâk, Shobek, and Ma'an, and the military escort granted to travellers, greatly facilitate the journey from Jerusalem to Petra, which was made by several Europeans in the spring of 1896; and indeed, Mr. Forder, the English missionary of Kerâk, made the journey from Kerâk to Petra, *viâ* Shobek, in September, 1895, being the first, I believe, to reach Petra, either from north or south, for about 12 years. He

[1] Volume iii, p. 895.

travelled, however, under the protection of the Mutesserif of Kerâk. But we had no intention of revisiting Kerâk after the experiences which we had had of the Mujêlli Sheikhs, seeing that they have never been punished, either for their robbery and detention of us in 1890, narrated in my book, "With the Beduins," or the attack made on us by their followers in 1895. Besides, we desired, if possible, before proceeding to Petra, to reach Azrak and Toupdelrudduf, places of which we have often heard from the Beni Sakhr, and which lie many miles to the east of the Haj road, and are said to be of great interest. Azrak is described to us as containing abundant springs, a large pool, many palm trees, and a very large building. Mr. Wilfrid and Lady Ann Blunt passed to the east of it in charge of the 'Anazeh, on their journey to the Nejd, and in their map it is described as a ruined fort, but they did not visit it. We desired also to visit Ma'an, of which Mr. Doughty gives an interesting account in his "Arabia Petræa," and to see the Haj pilgrimage encamp there.

We started from our house on Mount Scopus, near Jerusalem, on March 30th, 1896. In addition to the usual number of men for our camp we had with us our trusty friend and dragoman, George Mabbedy, and Sheik Mohammed, of the Beni Sakhr. We had sent a messenger some days previously to the camp of that tribe, which was then at Kûstûl, to request Jeruah, the brother of Mohammed, in whom, as a man of tried courage and skill, we had more confidence than in Mohammed, to come, but Jeruah, having gone on a ghazú against the 'Anazeh, Mohammed came in his stead, accompanied by a negro slave of his family.

Descending the steep slope behind our house, and crossing over hill and dale, we reached the modern road between Jerusalem and Jericho, somewhat to the west of the "Inn of the Good Samaritan," and in the afternoon were comfortably settled in our camp pitched near the "Brook Cherith." The vegetation was in all its spring beauty, and seated before our tents we enjoyed the sweet air and lovely evening light, and saw the stately moon rise over the mountains of Moab, silvering all the valley, while the fire-flies darted hither and thither in their rapid flight.

The next day we crossed by the wooden bridge over the Jordan, then full and "overflowing all his banks," and rode through the valley on its eastern side through masses of wild flowers, amongst which were great patches of scarlet anemones and yellow marguerite daisies, tall enough to reach to the bellies of our horses, and under great flights of storks wheeling round and round in the air. Mohammed showed us with pride his sword, given, he said, to the Faiz family by Jezzar (the "Butcher"), some time tyrant of Acre, by whom it was used as a sword of execution. On the way we met several of the Adwan tribe, and could not prevent two of them from coming with us across their territory in pursuit of baksheesh. We pitched our camp for the night at Tell Rameh.

On the third day we mounted for several hours up the western slopes of the mountains of Moab, grassy and rich with wild flowers, and on reaching the table-land on the top, had much difficulty in getting the baggage mules over some very slippery ground and much thick mud

formed by the recent rains. We passed Umm el Amad, where our old friend Sheikh Hazáh, of the Beni Sakhr, killed last spring by his nephew in a family quarrel, lies buried on the hill-top, and reached Kûstûl, which we now visited for the fourth time. Here we stayed for a day to rest the mules, and whilst my wife made sketches from the ruins, I revisited Kâlât Zizah (pronounced by our guides Ziziah), which, like Kûstûl, was discovered and described by Canon Tristram. The great reservoir at Zizah struck me with greater admiration on this my second visit than on my first. It is in a more perfect state than any other that I know in this part of the country, but for want of repair contained no water. The stone entrances or sluice gates for admitting water to it stand almost complete, but the arrangements for penning back the rainfall to drive it through them have broken down, so that the main supply has failed. Besides the Khan near the pool there are considerable ruins at and near Zizah, and the land for many miles round that place and Kûstûl is well fitted for cultivation, the soil being deep and good. Evidently it supported many inhabitants in former times. Taking advantage of the delay at Kûstûl we sent a messenger to seek for our friend Abu Seyne, of the Adwan, who has so often travelled with us, but he had gone to Jerusalem to look for us. Finding that we had left he sought for us near the Haj road for some days, but never succeeded in coming up with us.

We left Kûstûl in charge of Mohammed and several of his tribe, one of them a man possessed of the most ruthless expression of countenance that I ever saw. He gave us no trouble, but looked as if he would have cut our throats for an exceedingly moderate remuneration, or even merely for the pleasure of the job. In 45 minutes we crossed the Haj road, and picked up a well-defined track going due east, which Mohammed told us led to Azrak. One hour further brought us to the remains of a strong wall formed of large and carefully-cut stones, which had evidently served to keep the water coming down a seyl from escaping over a slope in a wrong direction. Soon afterwards we reached a small pool of muddy water and rested while our animals drank. A Bedawy woman and her daughters, whom we found here drawing water in their skins, examined my wife with great curiosity, and, having looked slightly at me also, candidly confessed that they did not like the looks of either of us, and went off jeering at both. At the end of three hours from Kûstûl Mohammed made us pitch our camp near another dirty pool, and amongst flocks of sheep and herds of camels belonging to the Beni Sakhr. As he said this place, called El Matubbeh (the camping ground), was two days' journey from Azrak, and that it was not safe to camp further east and so nearer to the latter, we began to fear that we should not get to that place, and longed for poor Hazáh, who had taken us to the Castle of Khauranee the year before, when his brethren hesitated. Umm Moghr (described in my last narrative) bears south-east from El Matubbeh, distant, I judged, from 6 to 8 miles. The country all round is absolutely treeless and uncultivated, but there was much camel herb about it. The

landscape is like a bit of the Sussex downs. There was great talk amongst our guides and the shepherds tending the flocks here of the 'Anazeh being at Azrak, and of Druses who had come down there from the Hauran, owing to the disturbances in their own country, and our hopes fell lower and lower.

In the afternoon, Mohammed, who had ridden off to the nearest important Beni Sakhr encampment, came back with news that his brother Jeruah, with 500 of the Beni Sakhr, who had gone on a ghazú against the 'Anazeh, had captured many camels, and were returning westward pursued by the enemy, and that it would be quite impossible to go to Azrak. This was particularly annoying, as, owing to the unusually large amount of rain which had fallen, there was no difficulty this time arising from want of grass or water for the animals. We asked to be taken to Amr, or Amrah, a ruin lying, it is said, between Khauranee and Azrak (*see* my last narrative), but Mohammed declined on account of danger, and we were powerless. He offered, however, to take us to Toupdelrudduf. We have heard very varying accounts of the last-named place. When the Beni Sakhr wish us to go a journey into their country they tell us that it is a ruin with sculpture, like Umm Shetta (Masheta), only larger, and when they apprehend danger in reaching it they tell us it is only a little heap of burnt brick and smells of dead men, meaning that it is a place where homicides are frequent in the quarrels of the tribes. It is, perhaps, this same place that Doughty heard of as two days' journey south-east of Kŭlât Belka.[1] We thought that Mohammed would probably lead us a little way towards this place and then hurry us back again, and were so vexed that we determined to go next day south-west to Kŭlât el Belka, on the Haj road, and proceed along that road to Ma'an. In the night two messengers passed our camp dispatched by the Beni Sakhr to summon their fighting men, and in the morning all the flocks and herds were moving westward, so we supposed the news about the approach of the 'Anazeh to be true.

Proceeding in a south-westerly direction we came, in little over an hour, to a spot where the table-land descended sharply 200 or 300 feet to a lower plain. Here, before descending, we noticed, in a shallow pit under the crest of a small hill, four dome-shaped flint stones, each about 6 feet in diameter, which looked as if they must have been shaped by the hand of man, but for what purpose we could not surmise; two were entirely above ground and two half buried. Descending to the lower level by a gully we proceeded due west about 3 miles to a place called Kuneitran, to which we deviated, to examine what looked at a distance like ruins, but we found nothing there but mounds, caves, Arab graves, and a few upright stones that might be dolmens. There were, however, remains of a wall in the valley below to the west, apparently intended to pen back water. Es Sâmik bore about south-west. A wide belt of splendid red poppies, winding like a stream in

[1] "Arabia Petræa," vol. i, p. 13.

a hollow near the wall, no doubt indicated that water had been lying here recently. We passed many camps and flocks and herds of the Beni Sakhr as we proceeded to the west. While we sat upon the ground to rest, five out of our eight horses broke loose from their tethers, and made off careering over the plain, and as they all soon disappeared from view the prospect did not look cheerful. Some of our guides rode off, on the three horses which remained, to seek for the five, and we began to feel a little anxious. But after an hour all returned, and a little later we reached Kŭlât el Belka. Here there is a Khan for the Haj pilgrimage, with stone-built pools full of water, and several muddy hollows holding water after the recent rains, but which would, no doubt, dry up soon after they should cease. Here Mohammed said we were nearer to Toupdelrudduf than at our last camping place, and we, beginning to hope again, begged him to take us there, to which he consented with difficulty. The next day, therefore, after proceeding three hours along the Haj road to the south in heavy rain, we diverged from it to the south-east. We passed an old battle-field, where 'Anazeh and Beni Sakhr had, as Mohammed told us, often contended, and he pointed out some of the numerous little heaps of stones placed over the dead, as indicating the place where such and such a mighty man of valour belonging to the one tribe or the other had fallen. Another two and a half hours and a halt was called, and we pitched our camp in a valley by a muddy pool, the place being called Atara. We were to ride from here to Toupdelrudduf and back in one long day. Mohammed said that Atara was a dangerous place for us to be in. There was much reconnoitring, scouts were posted on the hills, and no fire or light was to be allowed at night. On our way here we passed a great number of beautifully marked Frankolin, called by the natives "Katta," some of which were shot for food. These birds are larger than pigeons, and great flocks of them were visible. We saw a large wolf pretty near. The Beni Sakhr seemed to get very anxious as night approached, and one of our servants came to report that he had overheard them arranging that if any enemy appeared they would escape on their mares and leave us, and it was observed that they had made certain preparations with this view. We were kept all night in an agitation—some fires being seen in a valley near—and were made by George, who had satisfied himself that there were real grounds for anxiety and that the servant's report was true, to lie down in our clothes, with everything prepared for a rush, and the abandonment of camp and baggage in case of necessity. The heavy rain poured down on the tents, one report after another came, and sleep was not to be had. It was of no use, we had to consent to give up Toupdelrudduf also; Mohammed said, "Thank God," and we started off south-west again very early the next morning. Having ascended the day before amongst hills several hundred feet high, we redescended until we came to a wide plain, at the end of which, under other hills rising to the west, in the direction of Kerâk, we saw the Khan and pool forming the Haj station of Kutrâneh. On the way we

passed large numbers of wild rhubarb plants, which Mohammed said the Bedawîn use medicinally.

Seeing a Bedawy with a dromedary in a valley, Mohammed and one of his spearmen rode after him, and they presently returned, both riding on the dromedary, and drawing their mares after them, the Bedawy running by the side. The latter called his fellow, who was in hiding near, and, he coming forth, we asked both to eat with us. They were willing enough, and we sat down and lunched in a hollow under a rocky slope, and making a fire of some dry scrub enjoyed the fragrant coffee.

The men said that they belonged to the Sherarat, and they had no shadow of shame in stating that they gained their living entirely by robbery. They said that Atara, where we had slept, was a very dangerous place. Their plan was to hide their dromedary in a retired spot amongst the hills, and when they had secured some booty to run to her, and, mounting, escape. No doubt they had stolen her, but they were poor and almost naked, and George asked Mohammed to let them have her back. The latter and his spearman rode on the dromedary to Kutrâneh, the owners running beside her, and there the animal was restored to them. But we soon afterwards regretted this act of clemency, for that night, just after we had gone to bed, George came to tell us that a poor Bedawy had arrived at our camp with nothing on but a ragged shirt, having been robbed of the rest of his clothing and his gun by these very Sharârat, who were now fully equipped for their business. Until they got this gun they had only one sword and two daggers between them. The Bedawy was one of the Hajii, and so a thief himself, but George felt bound to give him a little hospitality and a little clothing, and, being thus refreshed, in the morning he pursued his way to a camp of his tribe which was not far distant.

At Kutrâneh we sent Mohammed and one of our men to Kerâk with a letter from myself to the Mutesserif, enclosing one from the Pasha of Jerusalem, in which the latter stated that he had received an order from Constantinople to enable us to visit Petra, and asked that a military escort should be given to us. We went to see the Khan of Kutrâneh. The keeper of it said that his father and grandfather had held the post before him. The Khan does not look very old. There are three small cannon in it, said to have been placed there by Ibrahim Pasha. We bought a sheep and a lamb from some Hajii for the equivalent in Turkish money of 7*s*. At Kutrâneh there is a very large and well-built ancient reservoir 84 paces square, above it a small one, 46 by 8, overflowing into the big one. The earth is embanked round the pools so as to supply water to them. Above the smaller pool a stone wall arrests water descending to a hollow and turns it to the pools ; but they contained nothing but mud for want of a little repair.

The next day we rode to the ruins described by Dr. Bliss in the number for July, 1895, and called by him Kusr Bshêr. They are nearly due north of Kutrâneh. After one hour's ride up into the hil's we

reached an eminence from which we could see both Kusr Bshêr and Kutrâneh at the same time. The former bore 330°, the latter 170°. Three-quarters of an hour more brought us to Kusr Bshêr. From this Jebel Shihan bore 286°, and a large square reddish-coloured tower on the top of an eminence distant about 10 miles, and apparently on the north side of Mojib, bore 340°. I took the latter to be the tower of Umm Resas. A smaller ruin about 2 miles off, apparently a plain square reddish-coloured building, which we did not visit, bore 295°.

The pool below Kusr Bshêr, and about a quarter of a mile west of it, is well built with solid masonry, like that in the pools of Ziza and Kutrâneh. Some Hajii, who were encamped near, politely expressed the hope that we would come to live in the Kusr, while Mohammed's negro slave asked if all the English people were as mad as we, roaming about in wild places.

In the afternoon Mohammed returned from Kerâk with a polite letter from the Mutesserif, and five horse soldiers, and letters of recommendation to the Kamaikâm of Ma'an, and the chief officer of the gendarmerie stationed at Shobek. Our servant, who had accompanied Mohammed, told us that the journey from Kutrâneh to Kerâk took seven hours of steady riding, and that the road was good. We were glad to learn here that the report which we received last year of the death of Arar, Sheikh of the Howeytat, who has great power in Petra and its neighbourhood, was false. Having got into trouble with the Government he had been imprisoned at Damascus, but was now released.

The next day we parted with the Beni Sakhr, who went off happy with their baksheesh, and making their horses dance, while they flourished guns and spears, until they disappeared over the rising ground going north, while we, with our military escort, followed the Haj road southward. It was desolate enough, but enlivened now and again with small quantities of white broom, and patches of grass, and great flights of frankolin. The soldiers, who were Circassians, proved very obliging, and chanted sweet melancholy songs together as they rode. The Choweesh (sergeant) was the same who accompanied us last year from Kerâk to Jerusalem *viâ* the south end of the Dead Sea. We passed five Hajii, one of whom carried a Remington rifle. This the soldiers took from him, it being contrary to Government orders for the Bedawîn to have rifles. The man had such an evil cast of countenance that it was no doubt for the benefit of the very few passers by that he should be relieved of his weapon. After several hours we entered a defile, and issuing from the further end of it mounted a hill, from which we had a very extensive view of a mountainous country to the west, and of a plain and distant hills to the east. A remarkable sugar-loaf mountain was visible to the east, standing solitary in the plain. From this point there was a considerable descent to a valley, where we found many small hills of dried mud, shaped like those near the Jordan. At the end of this descent we came to the Wâdy el Hesy, which east of this, according to Doughty, contains a brook (perhaps, he says, the brook Zared of Moses) running out

to the Dead Sea. Doughty appears to have rejoined the Haj road at this point, having branched off from it to the west at Kŭlât el Belka in order to visit Kerâk. At the bottom of this wady we found a dilapidated old bridge of three arches, and a paved causeway, made, Doughty says, for the camels' passage over the slippery loam, but no water was in the hollow. Just beyond this was the Haj Station, which we reached, having ridden for seven and a half hours. The Kŭlât, which is near the bridge, is called Hesy, after the wâdy. It is in style like that at Kutraneh, but in a state of greater decay. The north-east corner has given way from the top half-way down, and it looks as if half of the north and east walls would soon fall. The cistern here mentioned by Doughty as being new when he passed, contained water of a very uninviting appearance overgrown with weeds, but inside the Khan was a cistern of good drinking water. The keeper of the Kŭlât objected to sell us any barley, of which we were in want for our horses, but the soldiers overcame the difficulty very summarily.

The mules were very late in coming in, having lost their way, and George, riding back, was pursued by two hostile Bedawîn, who called on him to stop, and fired two shots at him, but he outrode them on his fleet Arab mare, and got safe into camp. The Choweesh told us that from here to Ma'an was a very dangerous country, and that unless we could hear that there was water at the next station (Anêzy) we must go from here to Tafileh, and so to Petra. In the night, however, some Bedawîn passed who reported that there was water at Anêzy, so we continued the next day along the Haj road. The weather became bitterly cold with rain, and we were glad of our warmest clothes, and all the wraps we could carry on our backs. The first part of the journey was varied somewhat by hill and dale, and we skirted some hills to the west where we had some little excitement, owing to our discovering some nine or ten Bedawîn on camels and horses, watching us from above, and who moved down towards us, and then retreated.

Resting and making a little fire and coffee in a hollow, we mounted to the Ard Suwwan, or flint-strewn country, which extends as far as Ma'an, and, as travellers report, much farther, "a stony nakedness blackened by the weather," as Doughty well calls it. He reports the elevation of this plateau above the sea as 4,000 feet. We were glad to reach the Kŭlât at Anêzy, and to enjoy the warmth of a great bonfire of scrub gathered by our men. At a little distance to the west of this station is a fine black-looking volcanic mountain, and in the same direction a few miles off Doughty found a ruined town, which I judge from his description to resemble Kusr Bshêr, but we did not visit it. From here to Ma'an was about five hours' ride, over a country more desolate and more thickly strewn with flint and basalt stones than before. A mirage showed in front—the sun feeling very hot after the cold wind, which had ceased.

Ma'an has a most curious and interesting appearance from the desert. It is a small town built of dried mud surrounded with a wall and placed upon a little hill in the waste of clean yellow sand all around it. Below

us, as we stopped to look at it from the top of a slope, we saw a valley with gardens enclosed by mud walls, in which was the exquisite green of spring appearing in the foliage of figs and pomegranates, and the flower of peach trees, and tall tufted palms, and white-stemmed poplars springing high into the air, and slung poles attached to water skins for raising water. As we passed along the valley under the town we saw the elders sitting outside the gate, and watching us from above, and came upon running water, clear and cool, which gladdened the hearts of our poor beasts. We rode past Ma'an with every eye upon us, and found our camp pitched at the village of Shemmia, half a mile west of Ma'an, where there was also much foliage and abundant water. Indeed we were told that the latter is found everywhere in the neighbourhood at a few yards depth, although the sand is so dry above the water level that dead bodies are preserved from decay for many years after burial in it. We found the air most pure, dry, and pleasant at this place.

A little crowd soon gathered round our tents, and officers arrived to summon me to the Kaimakâm. Accompanied by George I passed through the narrow streets of Shemmia, between mud-built walls and unfriendly glances, to a large stone house, which is well built apparently out of older materials and recently restored, and is used as a Serai. The Kaimakâm remembered us. We had met him twice before when he was Kaimakâm at es Salt. I presented my letter, and he promised to facilitate our visit to Petra. He told us that we could spend three whole days in Wady Musa and return to Ma'an in time to see the Haj pilgrimage arrive there. Later in the day the Kaimakâm, accompanied by the Kadi, returned my call. The former promised to send his Choweesh with us, and also arranged with the Sheikh of Shemmia to accompany us. Indeed we were treated with the greatest courtesy by the officials at Ma'an.

The next morning we rose very early, full of the thought that at last we were to visit the rock-cut city of Edom, which we had so long desired to see, but still with an apprehension, derived from our previous disappointments, that some untoward event would yet prevent our getting there. After a few miles ride to the west, we passed out of the pure yellow sand which surrounds Ma'an, and entered upon hill and dale covered with scrub and aromatic plants, gradually ascending to a ridge. From this the descent was almost continuous until we reached the village of Eljy, and later the entrance to the Sik. For over an hour before getting to Eljy we followed a small stream down a wild, winding valley, where were abundance of partridges and blue pigeons, and where the water brought a rich crop of grass and wild flowers to the narrow bottom. The valley opened out wide, and the well-cultivated fields and gardens which surround the village of Eljy appeared brilliant with the blossoming almond and peach trees and all the green of spring. Through this we passed amidst the wonderment and scowling looks of the inhabitants, and down a very rough and stony path crossed by low stone walls of enclosure, then through the brook which flows down from 'Ain Mûsa, where, according to Arab tradition, Moses struck the rock. The strange

rugged purple-coloured mountains, in the midst of which Petra stands, were now open to our view, placed between the great white hills which lie to the south and east of it, and terminate in bulbous shaped rocks like those at Philæ, as of an ungraceful antediluvian world. We did not linger long amongst the imposing rock-cut tombs found here, as we were eager to enter the Sik, which was now at hand.

(*To be continued.*)

THE VISIT OF DAVID THE REUBENITE TO HEBRON AND JERUSALEM IN A.D. 1523.

By Thomas Chaplin, M.D.

The recent publication of the text of the "Diary of David the Reubenite," by the Clarendon Press, under the editorship of Professor Ad. Neubauer,[1] draws attention to the visit of that most singular man to the holy places of Hebron and Jerusalem in the year 1523. What amount of credit should be given to David's account of his wanderings is perhaps doubtful. Professor Neubauer in his preface (p. xii) remarks: "It is not my object to take off the mask of Reubeni and declare him a falsificator, or, on the other hand, to accept his facts without scrutiny. My task at present is to make this diary accessible to historians"; and Graetz, in his "History of the Jews," speaks of Reubeni as "a man come out of thick darkness from the far East, of whom one does not know whether he was a deceiver or a daring enthusiast."[2] There is, however, in that part of the diary

[1] "Anecdota Oxoniensia," Mediæval Jewish Chronicles, Ad. Neubauer, Oxford, Clarendon Press, 1895, vol. ii.

[2] "Geschichte der Juden," Leipzig, 1865, Band ix, s. 244. The English translation, Bella Löwy, Nutt, 1892, vol. iv, p. 523, has the following:— "From obscurity and out of the far East appeared a man, of whom no one rightly knew whether he was an imposter or a foolish fanatic, or whether he intended to play the *rôle* of a Messianic or political adventurer, but he caused a great stir among the Jews, which even affected the Marranos in the extreme West. David, an Oriental by descent, who had been for a long time in Arabia and Nubia, suddenly came to Europe on a particular mission, and started the wildest hopes, both by his imaginative discourses and by his reports of actual occurrences . . . . . .

David Reubeni's appearance and manner were such as to inspire alike fear and confidence. In both there was something strange, mysterious, and eccentric. He was of dark complexion, and dwarfish in stature, and so excessively thin, that continuous fasts had almost reduced him to a skeleton. Possessed of courage and intrepidity, he had at the same time a harsh manner that admitted of no familiarity. He only spoke Hebrew, and that in so corrupt a jargon that neither Asiatic nor European Jews understood him."

which refers to Palestine internal evidence that if it is not the adventures of David himself that are narrated, the story must have been written, or dictated, by someone intimately acquainted with the condition and manners of the country.

Reubeni's account of himself and his family is sufficiently striking:— "I, David, am son of King Solomon, may the memory of the just be blessed. My brother, the King Joseph, is older than I, and sits on the throne of his kingdom in the wilderness[1] of Khebor, and he reigns over thirty miriads; over the sons of Gad, and the sons of Reuben, and half the tribe of Manasseh."

There is little room for doubt that the Khebor referred to is the Kheybar of North-Western Arabia, where traditions are still current of the comparatively recent existence of free tribes of Jews there. In Jerusalem, I once had under my care a man who said he came from Kheybar, and claimed to be a "son of Rechab," of the Beni Israel, and that his tribe had the right to levy a poll-tax on the passing Mohammedan Haj! Gibbon tells us in a footnote that, "the banishment of the Jews (to Syria) is attested by El Macin and the great Al Zabari. Yet Niebuhr ("Description de l'Arabie," p. 324) believes that the Jewish religion, and Kareite sect, are still professed by the tribe of Chaibar; and that in the plunder of the caravans, the disciples of Moses are the confederates of those of Mahomet."[2]

According to Burckhardt, "A colony of Jews formerly settled at Khaibar has wholly disappeared. It is commonly believed at Mekka and Djidda that their descendants still exist there, strictly performing the duties of their religion; but upon minute inquiry at Medina, I found this notion to be unfounded, nor are there any Jews in the northern parts of the Arabian Desert. The Jews who were formerly settled in Arabia, belonged to the tribe of Beni Koreyta (Caraites). They came to Medina after Nebuchadnezzar had taken Jerusalem, when Kerb ibn Hassan el Hemyary . . . . made an inroad towards Medina, which he besieged, and on his return from thence, carried some of the Beni Koreyta with him to Yemen. These are the first Jews who settled in that country, and their descendants still remain at Szanaa."[3]

Mr. Doughty, in his "Travels in Arabia,"[4] vol. ii, p. 127, says: "It is certain that the Jews of this day have a fabulous opinion of Kheybar. Some of them (in the east) told me that 'the Yahûd Kheybar' are the Beni Israel. . . . . Merchants of Kasîm have related to me that 'there are descendants of the Yahûd Kheybar in Bagdad, who are accounted noble (asîly) among the Jews; there are besides, rich traders of them in India',

[1] במדבר. So also Dr. Bieberfeld in "Der Reisebericht des David Reubeni," Leipzig, 1892. Graetz, in his "Geschichte der Juden," has במדינת, "in the province."

[2] "Decline and Fall," chap. l.

[3] "Travels in Arabia," John Lewis Burckhardt, London, 1829, Appendix, p. 464.

[4] "Travels in Arabia," by C. M. Doughty, Cambridge, 1888.

but these words were, I found, as strange tales in the ears of the respectable (Bagdad) merchant Jews in Bombay." Dr. Wolff came in contact near Senaa with the Beni Khaibr, a tribe who identified themselves with the sons of Jonadab. Signor Pierotti also met with a tribe calling themselves Rechabites, about two miles south-east of the Dead Sea. They had a Hebrew Bible, and said their prayers at the tomb of a Jewish Rabbi (*see* Smith's "Dictionary of the Bible," s.v., Rechabites). A Persian gentleman of my acquaintance informs me that in his country these Jews are still remembered with reproach, and that when a Moslem wishes to curse anyone, he will sometimes say: "May you be as a Jew of Kheybar." It is interesting in connection with this subject to note that the Jews from Yemen who have within the last few years migrated to Jerusalem, declare themselves to belong to the tribe of Gad.

Reubeni's narrative continues:—"I departed from before the King, my brother, and the seventy elders who gave him counsel, and they commanded me to go first to Rome and the Pope, may his glory be exalted. And I journeyed from them from the wilderness of Khebor by the mountain road ten days, until I arrived at Jeddah, and there I was prostrated with a great illness."

הרה which I have translated "the mountain," is not improbably Reubeni's way of transliterating into Hebrew حرّة *harrah*, a lava field or volcanic district, of which there are many in North-Western Arabia. Kheybar itself is situated in one of them. But Reubeni may have meant a mountain road towards the coast, in order to avoid the city of Medina. Such a road is indicated in the very valuable map attached to Mr. Doughty's work.

From Jeddah Reubeni took ship to Suakim, whence he travelled to Dongola, and afterwards to Egypt. From Egypt he went to Gaza, and it is here the portion of his narrative which most concerns the student of Palestine begins:—

"After this, he (a Jew named Abraham) came to me,[1] and a goldsmith named Joseph, who keeps a shop. He had a brother, whose name was Jacob, and their old father was living. He and Joseph the goldsmith remained with me that day about two hours, and I was reticent with them, and communicated to them only short hints.[2] And the Jews sent meat and bread to me secretly by the hand of Abraham the Jew.

"I remained at Gaza five days, and afterwards set out from Gaza on the 19th of Adar, 1523, and proceeded on the road to Hebron. I travelled by day and by night until I arrived in Hebron at the place of the Cave of Machpelah, on the 23rd of Adar, at noon. Then the guardians who guard the cave came to me to kiss my hands and my feet, and said to me: 'Come in thou blessed of the Lord, our lord, and the son of our lord.'

[1] At Gaza.

[2] ראשי פרקים, *lit.*, heads of chapters or sections, *i.e.*, in reference to the mysterious message which David professed to be charged with.

And there came to me two old men of the guardians of the church[1] of Abraham, and they are the wisest and the greatest, and heads over all the guardians. And it is they who put out (from) and bring in to the church,[2] and they are the judges in Hebron. They took me by the hand, and caused me to stand before a certain tomb, and said to me : 'This is the tomb of Abraham our father,' and I prayed in that place until I had finished the prayer. Then they showed me on the north side a little chapel[2] in which is the tomb of our mother Sarah. And in the middle, between the tomb of Abraham and the tomb of Sarah, is the prayer place[2] of the Ishmaelites and beyond (*lit.* above) the head of Abraham the tomb of Isaac in the large church,[2] and near the tomb of Isaac the tomb of Rebekah, beyond (*lit.* above) the head of the tomb of Sarah ; and beyond (*lit.* below) the feet of the tomb of Abraham, the cenotaph[3] of Jacob in another large chapel.[4] And near the cenotaph of Jacob is the cenotaph of Leah, opposite the tomb of Sarah.

"After this I gave them alms, ten *parakhim*, in order that they might buy oil, and then I said to the guardians that these cenotaphs are not true ; that the truth is that Abraham, Isaac, and Jacob are in the cave underground, and that they were not buried on the surface of the earth. They answered me : 'Thy words are just,' and I told them to show me the cave. So I went with them and they showed me the opening of the door of the cave in the mouth of the pit. There is a lamp burning day and night in this pit, and they let down the lamp into the pit by a rope, and from the mouth of the pit I saw the opening of the door about the height of a man, and I was convinced that it is indeed the cave. So I rejoiced in my heart, and I sent away the Ishmaelites from before me, and did my devotions at the mouth of the pit until I had finished the prayer.

"And after this I called the older guardians, and said to them : 'This is not the opening to the cave ; there is another opening' ; and they answered me : 'Yes ; in ancient times the opening of the cave was in the middle of the great Church,[5] in which is the cenotaph of Isaac' ; and

[1] כנסת, a place of assembly. Reubeni uses this word (or its plural) for churches, mosques, synagogues, and chapels or praying places. Perhaps "church" covers all these meanings best. It is not clear to me whether כנסת אברהם, *Kanaeseth Abraham*, means a synagogue of the Jews or the Haram. If the former, then we have the interesting statement that Reubeni's conductors over the Haram were Jews. Benjamin of Tudela says :— שם הבמה הגדולה שקורין שנט אברהם והיא היתה כנסת יהודים בימי ישמעאלים. "Here is the place of worship called St. Abraham, which during the time of the Mohammedans was a synagogue of the Jews" ("Itin. of R. Benjamin of Tudela," translated and edited by A. Asher, London, 1840). On the whole, it seems more probable that these two wise and influential guardians were Moslems, and that the place they guarded was the Haram.

[2] כנסת.

[3] ציור קבר, the form or representation of the tomb.

[4] בכנסת גדולה אחרת, *see* footnote [1].

[5] כנסת.

I said to them: 'Show me the place of that opening'; and I went with them and they removed the covering from the floor of the Church,[1] and showed me the place of the opening of the door, and it was shut with large stones and lead,[2] and no man was able to remove that masonry. And after this I said to them: 'Cover the floor with the coverings.' And I asked them: 'Is it known to you who built (up) the opening of the cave?' And they brought out to me a book, and read it before me, and it was said in that book that a certain King built (up) the opening of the cave after the Ishmaelites had taken the Sanctuary from the Christians, and that King was the second from Mohammed; and that King also sent four men into the cave, every one with a lamp in his hand, and they remained inside the cave about an hour, and afterwards came out. And three of them died immediately on coming out of the cave, and the fourth remained dumb until the third day. And the King who sent him asked him: 'What didst thou see in the cave? And he said to them (*sic*): 'I saw those figures,[3] namely, Abraham, our father, on a couch, in the place of the upper cenotaph which they have made, and around the couch of Abraham, our father, lamps all round and many books, and his couch was covered with beautiful coverings, and near to Abraham, our father, Sarah, our mother, and Isaak, and Rebekah, beyond (*lit.* above) the head of Abraham and Sarah; and Jacob, our father, and Leah, our mother, beyond (*lit.* below) the feet of Abraham and Sarah, our mother. And there were lamps all round upon the couches, and there is upon each of the couches the likeness of a man for a man, and the likeness of a woman for a woman.[4] And the lamps which were in our hands became extinguished, but in the cave there was a great light like (that of) the sun. And after we had seen all these things we came out, and there was there a pleasant

[1] כנסת.

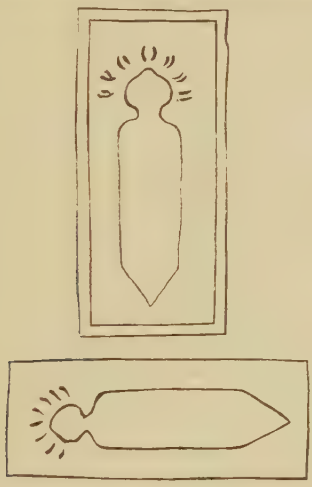
[2] עופרת, "Iron," Bieberfeld.

[3] ציורים, forms, representations.

[4] This is surely a remarkable statement. Jacob was embalmed in Egypt, and quite possibly his "likeness" may have been portrayed in Egyptian fashion upon his mummy case. If this were so, a tradition of it may have been handed down, and, in course of generations, been extended to the tombs of the other Patriarchs also. It has never been a custom of either Jews or Moslems to put representations of the human figure on sepulchral monuments. The only instances of anything of the kind that I remember are at Mogador, in Morocco, where an extremely rude indication, rather than representation, of the human form, is carved on the flat gravestones of the Jewish cemetery, in order, I was told, to mark the position of the head and feet of the body below, for all are not buried in the same direction. On next page is a copy of a rough sketch of such gravestones, which I made on the spot. In Moslem burial places a figure of a turban cut out of stone or other material may often be seen placed over the position of the head of the corpse below, and in tombs under cover the turban itself is sometimes wound round as in the royal tombs at Constantinople.

odour like (that of) incense. And we went before the tomb of Rebekah, and the four of us went on, and after that there cried at us the resemblance of a man which was upon the couch of Isaac,[1] with a loud voice, and we stood (terrified) until we got breathless out of the cave.' And those are the figures of the tombs and the masonry of the opening of the cave which that King caused to be closed until this day. These were the words of the fourth (man) who remained dumb one day (*sic*).

"After this I stood and prayed at the opening of the pit (and I saw the opening of the door of the cave) on the night of Sabbath until morning, and in the morning I remained to pray until the evening and on the night of the first day (of the week) I prayed at the mouth of the cave, and did not sleep until the morning. And the seventy old men had said to me that on the third day I should see a sign, and I waited



Engraved Figures on Jewish Gravestones at Mogador.

longing silently to know what I should see. And early on the first day (of the week), before the rising of the sun, the guardians called me, in great joy, and said to me: "Our lord, and son of our lord the prophet, rise to rejoice with us, for a great joy is happened to us, namely, that water is come to the pool of this Church,[2] which had not been the case

[1] The Moslems of Hebron have a dread and fear of Isaac and Rebekah, whom they believe to be irritable, ill-tempered, and malicious. It used to be told of the famous Ibrahim Pasha, the Egyptian, "who feared neither man nor devil," that, having caused himself to be let down into the cave, he surprised Rebekah combing her hair, who resented the intrusion by giving him a box on the ear, which caused him to fall down in a fit, so that he was with difficulty rescued alive.

[2] בית הכנסת.

for four years,' and I went with them to see the water, and lo, it was coming good and pure into the pool from the distant land.

"After this I set out from Hebron on the 24th of Adar, and travelled to Jerusalem, and robbers came upon the road between Hebron and Jerusalem, and they said to me: 'O, our lord, son of the prophet, behold the enemies are before us'; and I said to them: 'Do not be afraid, do not tremble; they shall fear and you be safe.' Hardly had I spoken with them, when, lo, the Head of the Turkish Police,[1] came from Hebron with many servants, and the robbers saw him and fled, all of them. So I went with him to Jerusalem, and entered the city on the 25th of Adar, 1523, and that day I went into the Holy of Holies,[2] and on my coming to the Sanctuary all the Ishmaelite guardians came to bow down before me and to kiss my feet: and they said to me: 'Come in, thou blessed of the Lord, our lord son of our lord.' And their two principal men came and took me into the cave which is under the stone of foundation,[3] and said to me: 'This is the place of Elijah the prophet, and this the place of David the King, and this the place of Solomon the King, and this is the place of Abraham and Isaac, and this the place of Mohammed,' in the cave under the stone of foundation and above. And they showed me the places of the prophets below and above the stone. And I said to the guardians: 'Now that I know all these places go your ways, for I wish to pray, and in the morning I will give you alms,' and they went their way. And I knew already that all their words were false and vain, and I prayed until all the Ishmaelites came to pray. And they went out of the court from their prayer, and two hours after night went to their houses, and I went underneath the stone of foundation. Afterwards the guardians extinguished all the lamps of the court except four, and before shutting the doors they came to look and searched if they might find anyone sleeping in the cave in order to put him out. And they found me and said to me: 'Come out of that place, for we guardians cannot allow any man whatever to sleep there, for so we have sworn to the King; and therefore we are not willing that thou shouldest sleep in that place, and if thou dost not go out, we will go to the Governor and he will cause thee to be put out against thy will.' When I heard their hard words I went out of the court, and they shut the doors round the court. I prayed and fasted all night, and that was the night of the fourth day (*i.e.*, Wednesday). And in the morning when the Ishmaelites came to pray in the court, I entered with them, and when they had finished their prayers, I called with a loud voice, 'Ho, guardians!' and they all came before me, and I

[1] I follow Dr. Bieberfeld in his rendering of בעל המשפט של התוגר. The government of Syria had been put into order by its Turkish conqueror, Selim I, about five years before the period of Reubeni's visit.

[2] By Holy of Holies, Reubeni apparently means the Dome of the Rock, which, in the traditional belief of the Jews to the present day, covers the site of that portion of the Temple.

[3] The sacred rock over which the Dome is built.

said to them: 'I, your lord and the son of your lord the prophet, came from a distant land to this Holy House, and my spirit yearned to stand within it and pray, and not to sleep.' And after this there came four of the guardians and drove me out, and I said to them: 'I (am) your lord and the son of your lord; if you desire peace from me it is well, and I will bless you; and if not, I will be avenged on you, and will write to the Governor (תוגר = the Turk) of your evil doings.' And they answered me: 'Forgive us this time, for we wish to serve thee, and to be like slaves to thee all the time thou remainest in the Sanctuary, and to do thy will.' Then I gave them ten ducats as alms, and remained in the Sanctuary and fasted in the Holy of Holies; five weeks bread I did not eat and water I did not drink, from the night of the Sabbath to the night of the Sabbath, and I prayed under the stone of foundation and above. And there came ten messengers from the King my brother Joseph and his ancients to me, and they made themselves strange and stood before me in the Sanctuary . . . .

"And the Ishmaelites have a figure on the top of the Dome of the Court, and that figure is like a half-moon turned towards the western side, and on the first day of the Feast of Weeks, 1523, it turned towards the eastern side, and when the Ishmaelites saw that, they cried with a loud voice, and I said to them: 'What are you crying out about?' They answered: 'Because of our sins that figure of the half-moon is turned towards the side of the sunrising, and that is an evil sign for the Ishmaelites.' And after this, the workmen of the Ishmaelites went up and returned that figure to its place on the first day, but on the second day the figure returned a second time to the eastern side whilst I was praying, and the Ishmaelites cried out and wept and sought to turn it back but could not. And the old men had said to me before: 'When thou seest that sign, go away to Rome.'

"And I saw the Gate of Mercy and the Gate of Repentance,[1] and went under the Sanctuary, which is a building as large as the upper building. And I did under the Sanctuary that which the old men bade me, in a place to which no man might come. And the sign mentioned of the figure (of the half-moon) was seen after I had done the commands of the old men under the Sanctuary.[2]

"And after this I went up to the Mount of Olives, and saw there two caves, and I returned to Jerusalem and went up to Mount Zion, and there are there two churches[3] in the place of the convent[4]; the church in

[1] These two gates belonged to what is now called the Golden Gate.

[2] It is difficult to understand this obscure passage. Perhaps by "the Sanctuary," מקדש, *el Aksa* is intended, and Reubeni was taken into the subterranean passage and chamber, as visitors now are. But what the commands of the old men were, is a mystery.

[3] כנסיות.

[4] Professor Neubauer has here בירה, the palace, or castle, but notes that the MS. has דירה. I venture to think that דירה is the right reading,

BIBL. COLL. FOCI FRERU

the hands of the Christians is the upper one, and the lower one is in the hands of the Ishmaelites, and the Ishmaelites opened[1] for me and showed me the likeness of the tomb (דמות קבר = *cenotaph*), and said to me that it was the tomb of David the King, on whom be peace, and I prayed there. And I went out from there and went to the upper church,[2] and the Christians opened to me, and I entered that church[2] and prayed there. And after that I went from Zion to Jerusalem. And I went to the house of a Jew whose name was Abraham the Gaer (or Haggaer). He was a goldsmith, and lived over the synagogue, and there were there old women who washed the lamps of the synagogue. And when I was in the house of that Jew two Ishmaelites were there, and I asked him: 'What is thy name?' and he answered me: 'Abraham'; and after that I sent away the Ishmaelites, and said to them: 'I have some business to do with this goldsmith,' and then the Ishmaelites went their way.

"And I asked him: 'Do you pray at this season, "Who causeth the rain to fall," or "Who causeth the dew to fall" (Morid haggeshem, or Morid hattal?)'?[3] And he said: 'Who causeth the dew to fall?' and stood astonished. And I spoke many words with him, but did not tell him that I was a Jew until the third time that I went to his house before my departure from the Sanctuary. And I said to him: 'Describe to me Venice and Rome and Portugal'; and he described them all. And I said to him: 'I am wishing to go to Rome'; and he said to me: 'For what purpose art thou going?' and I said to him: 'I am going for a good purpose, but it is secret, and I cannot reveal it; but I wish you would counsel me which way I should go.'

"Afterwards I gave into the hand of the said Abraham a book which I had written for the Sanctuary, and said to him: 'Give the book for me into the hands of the ruler (Nagid) Rabbi Isaac'; and I departed

corresponding to the Arabic دير, *a convent*. In A.D. 1523 the place was still in the hands of the Franciscans, who had held it since A.D. 1313, and were not expelled until A.D. 1561, when they bought of the Georgians the property where the Latin Convent and Church of St. Saviour now stand.

[1] Dr. Bieberfeld has here גדר, *gader* or *jader*, an enclosure, which he translates *Gitter* = lattice. If, as Professor Neubauer intimates, the writer of the MS. was probably a German Jew, *gitter* is very likely the true translation; but where Bieberfeld got the word גדר from I know not. Visitors are still taken to look at the tomb through a trellised doorway.

[2] כנסת.

[3] The prayer which the people of Israel were commanded to offer at the end of the tithing in the third year—"Bless thy people Israel and the land which thou hast given us" (Deut. xxvi, 15)—is explained by the Mishna to include a petition for dew and rain ("Maas. Sheni," 5, 13). These prayers have a place among the "Eighteen Benedictions" of the Jewish Liturgy. According to Dr. Bieberfeld, the Jews of the East use the prayer for rain during the winter or rainy season, and that for dew during the summer, when rain would be injurious. (*Op. cit.*, Noten, p. 4.)

from Jerusalem on the 24th of Siwan, 1523, and a great number of Ishmaelites, riding on horses, accompanied me five miles."

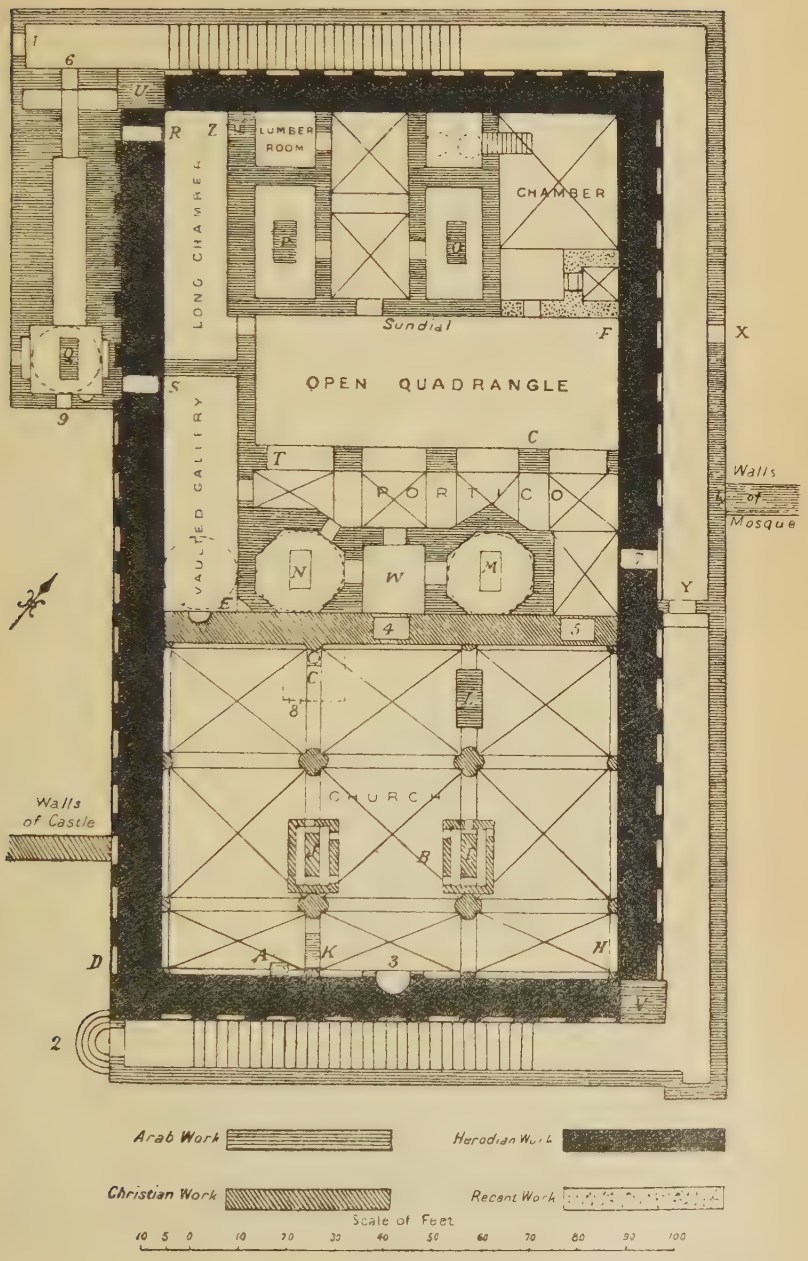
NOTE ON THE HEBRON HARAM.

By the Rev. Canon Dalton, C.M.G.

That portion of the diary of David the Reubenite which describes his visit to the interior of the Haram at Hebron in A.D. 1523 is full of circumstantial detail, and carries on its face an aspect of truth altogether different from anything which "a fabricated" account might be expected to exhibit. What he says he did and saw on a particular date is wholly distinct from the account he gives of his ancestors and of those he had left behind in Khebor, or the ambitious projects he may have cherished as likely to result from his travels. The stories about his ancestors he may have himself come to have believed. They may very well have been founded on fact, however largely they were subsequently embroidered with imaginary additions, just as, in a similar way, the accounts given by many otherwise truthful and trustworthy persons in England regarding their own ancestors are wont to be, even in these enlightened and matter-of-fact days. But be this as it may, I shall confine myself in the following note to what Reubeni says that he actually saw in the Haram at Hebron in the spring of A.D. 1523. In any careful chronological catena of authorities who describe their visits to the Patriarchs' Tombs, such as that given by Colonel Conder at the end of the paper concerning his own visit to Hebron in 1882, and published in the *Quarterly Statement* for that year, p. 212, Reubeni's account will henceforth have to be inserted immediately before that of the tract, "Jichus ha Aboth," A.D. 1537. "All the extant notices of visits to the sepulchres of the Patriarchs at Hebron are brought together and discussed by Comte Riant, in a paper in vol. ii, p. 411, of the 'Archives de l'Orient Latin, 1884'" (Guy Le Strange, "Palestine under the Moslems," 1890, p. 318).

In the late Dean Stanley's "Sermons in the East," 1863, pp. 141 to 169, is the inimitably fresh and picturesque narrative of the visit paid by him with the Prince of Wales to the same Haram in January, 1862. In the late Professor Fergusson's "The Holy Sepulchre and the Temple at Jerusalem," 1865, Appendix J, on "the Mosque at Hebron," pp. 136 to 151, is the description of the visit paid by him to the interior at the end of 1864. The account appeared originally in the "Builder," 24th December, 1864, and is valuable as containing the opinion of a trained architect as to dates of stonework, etc. In the *Quarterly Statement* for 1882, pp. 197 to 214, appeared Colonel Conder's careful and detailed report, with Sir Charles Wilson's additional note, concerning the visit paid by both of them, with the late Duke of Clarence and with the Duke of York, to the interior of the Hebron Haram in April of that year.

This has since been reprinted in a shortened form in the third volume of the "Survey of Western Palestine," pp. 333 to 346; and in a still fuller form, and with a more detailed plan of the Haram, in the "Cruise of H.M.S. Bacchante, 1879 to 1882," vol. ii, pp. 595 to 619. The three several accounts written by Dean Stanley, Professor Fergusson, and Colonel Conder should be really re-read, for the sake of refreshing the memory, by those who wish properly to appreciate in detail David Reubeni's account, now translated by Dr. Chaplin. Similarly the quotations from various Moslem visitors, given by Mr. Guy Le Strange, in his "Palestine under the Moslems," 1890, pp. 309 to 327, can be readily re-perused by those who think that Reubeni may have copied or borrowed the accounts of others and incorporated them into his own diary. As, however, without reference to the plan of the interior of the Hebron Haram (*Quarterly Statement*, 1882, p. 196), his narrative can only be very inadequately understood, that plan is here reproduced with these few elucidatory remarks. The Hebron Haram, as originally constructed, appears to have been a miniature copy of the Temple Haram at Jerusalem. The Cave of Machpelah is enclosed at its south-eastern end, under the three-aisled church that now stands above it. The floor of the church and of the quadrangle in front of it is now 18 feet above the level of the ground on the western exterior of the Haram. This higher level is therefore now approached by means of two stairways (1 and 2), erected in the tenth century, "one for going up and one for coming down," against the north-western and south-eastern exterior ends of the Haram, and by means of the passage along the whole north-eastern side. These Moslem additions make it thus practically a dependence of the Jawaliyeh Mosque, entered at X, on its north-eastern side. The only entrance now into the Haram is at 7. This door was broken through the Haram wall in the tenth century by order of the Fatimite Khalif Mahdi, who came to the throne of Egypt in A.D. 918. Professor Fergusson, Sir Charles Wilson, and other authorities consider it probable that the original entrance in Herodian and Byzantine times was in the north-western corner, and may have been similar in design to that of "Barclay's Gateway" in the Jerusalem Haram, and that the portal in the massive masonry is concealed by the buildings known as Joseph's Tomb, Q, erected by the Moslems in the tenth century. No traces of an entrance are visible in the exterior walls of the Haram anywhere else, and as this is the only place where the Moslem additions cover up any extent of these walls it seems natural to conclude that the original entrance must now be covered by this erection. In the accompanying plan the lower portion only of that building is shown, with its entrances at 6 and at 9; this last, from the kalah, or castle, opens immediately upon the Tomb of Joseph itself. The upper story, 18 feet above it, consists of two chambers; the one approached from the level of the quadrangle by S, a door opened through the Haram wall by Shihâb ad Din Ahmad al Yaghmuri, one of the guardians, and afterwards Governor of Jerusalem and Hebron in 1394 A.D., when he also


LUMBER ROOM
CHAMBER
LONG CHAMBER
Sundial
OPEN QUADRANGLE
VAULTED GALLERY
PORTICO
CHURCH
Walls of Castle
Walls of Mosque
Arab Work
Herodian Work
Christian Work
Recent Work
Scale of Feet
10 5 0 10 20 30 40 50 60 70 80 90 100

erected the cenotaph of Joseph in this chamber, immediately over his tomb below, for the convenience of pilgrims visiting the cenotaphs of the other patriarchs within the Haram. The other chamber, over 50 feet long, in this upper story of Joseph's tomb is approached by the doorway R, pierced by the same authority at the same date. All the buildings in the northern two-thirds of the Haram, that is, in the portion outside the church, are Moslem, and, with the exception of the two octagonal chapels containing the cenotaphs of Abraham and Sarah and the two oblong chapels containing the cenotaphs of Jacob and Leah, were erected in 1331 A.D., and are the successors of those that were built, as Mukadessi tells us (Pilgrims' Text Society, 1886, pp. 50, 51), as a public guest-house, with kitchener, baker, and servants appointed thereto for the accommodation of Moslem pilgrims. What is contained in the 18 feet depth of soil or rock immediately beneath these buildings and the quadrangle outside the church is not known, or whether its present level is the same as it was in Herodian or Byzantine times. It would appear possible that this two-thirds of the Haram interior may have originally been supposed to cover the extent of the field purchased by Abraham outside the actual cave (Gen. xxiii, 17), and its level when first enclosed may have been nearer that of the exterior of the Haram on the west than that of the present interior. Judging from the enclosure at Beit-el-Khulîl, where the stones are apparently of the same date as those in the exterior walls of the Hebron Haram, the motive that prompted the construction of that as well as of this was merely the desire to mark off a site hallowed by the presence of the Father of the Faithful. Beit-el-Khulîl was the spot where he traditionally had pitched his tent, Machpelah his place of burial. These sites were preserved, but without any adventitious additions. Hence, in Herodian times, when the Haram was entered at the north-west corner, the visitor would, as he stood "in the field that was before Mamre," see in the cliff face fronting him at 8 the square door that led to the double cave behind. The bodies of the patriarchs would long ere that date have returned to their native dust; even Jacob's "mummy" could not have endured till Herod's days in that moist and damp climate. It was the cave alone that was preserved for the sake of the hallowed reminiscences that clung to it. In the Byzantine period a church was erected over the cave; and judging by what happened at the Holy Sepulchre, at Bethlehem, at Nazareth, and elsewhere, the interior of the cave would be encased with marble, and otherwise ornamented. All this would be overthrown by the Moslems. But Ibn Batûtah, who visited Hebron in 1355 A.D., states that even then the caves were "paved with marble." The level of the court outside the church was meanwhile artificially, and probably gradually (with the *débris* of Byzantine church, etc.), raised 15 feet, so that the present approaches round the exterior of the Haram and at a higher level would be more convenient, and they are entirely Moslem, as has been mentioned.

After entering the Haram at 7 the visitor finds himself in a wide narthex or portico, at the north-west end of the church. This portico

communicates through four pointed arches with the open quadrangle; and by two doors at 4 and 5 with the church. There was formerly a fifth arch in the portico at its west end, and a third doorway to the church at E. The latter of these was blocked, and the former removed when the vaulted gallery was erected. Thus each aisle of the Crusaders' church had a doorway at its north-western end, and probably each had an altar at its south-eastern end, in honour severally of each of the three patriarchs, St. Abraham, St. Isaac, and St. Jacob. This arrangement of separate altars would thus resemble that which existed in the church on Tabor, where Moses and Elijah each had a separate altar and side chapel. At G is an Arabic inscription on the pier, stating that repairs were made to this part of the building in 1755 A.D. At T is the *sebîl* or water cistern for ablutions. At E is shown Adam's footprint. N is Abraham's cenotaph, M is that of Sarah. W is the vestibule. At F is the fragment of a Greek inscription of the Byzantine period on the wall. P is Jacob's cenotaph, O is Leah's. Z are steps by means of which an ascent is obtained on to the roof of the lumber room, and thence out on to the north-west wall of the Haram, and so along the top of the broad walls to the two minarets that now crown the corners at U and V. In the church over the cave, L is the merhala or reading desk, K the mimbar or pulpit, 3 is the mihrab, J is the cenotaph of Isaac, I is that of Rebecca. At C is a round hole in the floor of the church, looking down through which a square chamber is seen below, with a square-headed doorway at 8 leading into the outer or western cave. This cave apparently extends from 8 to A, where there was another entrance to it from the church - now blocked. Pilgrims in the time of the Crusaders would pass down steps at C, and after looking into the inner or eastern cave in which the patriarchs had been buried, would pass along and come up at A. At D, in the exterior wall of the Haram, is a hole opening into this outer cave, where the Jews and others are now allowed to stand and pray, in a similar manner as they do at the "Wailing place" outside the Jerusalem Haram. At B, in the floor of the church, was the descent into the inner or eastern cave under the central aisle. This aisle, as well as the whole floor of the church, except C, is now covered with carpets and rugs. At H is a Greek invocation to Abraham, dating from the time of Justinian. For fuller detailed information the reader can only again be referred to *Quarterly Statement*, 1882 (pp. 197 to 214).

Taking up now Reubeni's narrative of his visit in 1523 A.D., we may note:—

1. For "the 23rd Adar," we should apparently read 20th Adar. The distance from Gaza to Hebron is between 33 and 34 miles. He left Gaza on the 19th, and, travelling all day as well as after sundown and before sunrise, reached Hebron midday of Thursday the 20th. He left Hebron, after praying three days in the church, on Monday morning, the 24th Adar. The time spent at Hebron would alone necessitate this correction, and he evidently means to say that he travelled with haste from Gaza to Hebron, whereas if he had taken four days and nights to cover the

distance, this would manifestly not have been the case. With this one correction made, all his other statements cohere definitely and accurately.

2. "The seventy old men" who sent a message to Reubeni were the hereditary Moslem guardians of the mosque. They are now said to be "forty" (Stanley, p. 154). In each case the number is, of course, a round one, and in neither is it to be literally pressed. Two of them, as Sheikhs, are told off to attend him, and see that all arrangements regarding backshish and other matters are fairly carried out. Reubeni states explicitly that these guardians are they who "put out from and bring into the church,' *i.e.*, have the right of excluding persons or admitting them to the Haram. They address Reubeni complimentarily five times as "son of our lord," that is, as they themselves once expressly say "of Abraham, the Prophet": their common ancestor and his, and the presiding *genius loci*. So in like manner Reubeni afterwards to the guardians of the Jerusalem Haram claims to be "the son of their lord," the prophet Abraham.

3. His description (p. 47) of the relative position of the cenotaphs of the three patriarchs and their wives is most accurate. The prayer-place of the Ishmaelites or Moslems (p. 47), W, between the two chapels containing respectively Abraham's cenotaph, N, and Sarah's, M, to the north-east of it, is just outside the door of the church, and here Moslem visitors would stand and pray immediately after ablution at the *sebîl*, T, in the portico; thus standing, they would face the entrance of the mosque, the cave itself, and Mecca.

The cenotaphs themselves are always said to have been erected "by the Gentiles," *i.e.*, Christians, *e.g.*, Benjamin of Tudela, A.D. 1172 (*Quarterly Statement*, 1894, p. 296). Photographs have been published of Abraham's and Sarah's. But the two actually within the church, now called those of Isaac and Rebecca, J and I, are different from the other four. They appear the oldest, and they only are enclosed in two masonry shrines of Santa Croce marble, through the windows in which the two cenotaphs can be seen. These two cenotaphs are remarkably like the tombs of the Norman Kings of Sicily in the cathedral at Palermo, and, if erected when the church was built (*i.e.*, between 1167 and 1187 A.D.) by the Crusaders, would be of the same date as, and possibly by the same artists as those that reared, the red porphyry sarcophagi and hearse-like canopies at Palermo from 1154 A.D. and onwards. These two cenotaphs also are the only ones of the six that stand over the cave, and would be on either side of the site of the high altar.

4. Having been shown the cenotaphs, Reubeni asks about the cave beneath, and gives the guardians money, apparently to purchase oil for lighting the lamp to be let down to illuminate the aperture at C, to which they then conduct him. The chief entrance from the church to the innermost cave was in front of the high altar and alongside the cenotaph, now called that of Rebekah, at B. There was another entrance at A from the side aisle of the church into the middle (or western) cave; and at C was, and is still, the entrance to the third

and outermost cave, or rather the cavernous pit outside the "double cave" proper of Machpelah (*Quarterly Statement*, 1882, p. 200, and p. 214). Reubeni's "opening of the door of the cave in the mouth of the pit" (p. 47) is undoubtedly this entrance at C. The words he uses to describe what he there saw are almost identical with those employed by Colonel Conder and Sir Charles Wilson at the same spot. Reubeni thus anticipated us in noticing the actual *door* into the cave. So, too, when he proceeds to describe the examination of the now-closed entrance at B, and the iron clamps in the pavement in "the middle of the great church" over the inner cave, and the removal by the guardians of the carpets that covered the floor of the church, the description (p. 48) is precisely the same as that given by Colonel Conder on p. 200. No visitor had made mention of this entrance before or since Reubeni till Raouf Pasha, the Governor of Jerusalem, in 1882, had discovered it on the evening before our visit, and insisted on the guardians removing the carpets and showing it to the Princes the next day when we were there. Two, therefore, out of the "four fresh discoveries" recorded by Colonel Conder at p. 207 were anticipated by Reubeni.

5. Benjamin of Tudela, in 1172 A.D., went down with a lighted candle in his hand through the three caves. If he there found ossuaries, by the six graves of the patriarchs, the bones in them were more likely at that date to have been Christian rather than, as he supposed, those of Israelites (*Quarterly Statement*, 1894, p. 297). But the run of the sentence, and the abrupt way in which in the very next sentence Benjamin passes to the description of Beit-el-Khulîl, three miles away from the Haram, lead me to imagine that we should place a full stop at "night," and that the adverb "there" refers to Hebron in general. He can scarcely mean to say that during the time of the Crusaders' occupation of the Haram, and when the Church of St. Abraham was in all its glory, the Jews were allowed to deposit the bones of their friends in the crypt of the Christian church.

6. The story read by the guardians to Reubeni from some written account as to the closing of the B entrance in the pavement before the high altar of the church is most interesting. The cave was the crypt of the Crusaders' Church, as at Nazareth and as at Bethlehem. It is quite possible that we may find hereafter, when it is again opened, that the face of its natural rock has been cut away by them, and stone groined work inserted. More especially as 'Ali of Herat, writing in 1173 A.D., fifteen years before Hebron was retaken by Saladin and giving an account of what he himself saw there, states (Le Strange, "Palestine under the Moslems," p. 317) that he was informed that in the year 1119 A.D., in the reign of Baldwin II, a certain part over the cave of Abraham had given way and was repaired by the Franks from below. There seems every probability, I think, that on the floor are six low oblong stone slabs ("couches," says the account of the mason read to Reubeni), incised with the figures of the three patriarchs and their wives sculptured in relief, similar to those of the Norman period and

of the same date to be seen in English Cathedrals, and with inscriptions round them—so says Benjamin—probably in Latin. It is even possible that "lamps," the old sconces and mortars for lights, set there by the Crusaders beside them may be still *in situ*.—(Though the light itself shining ever in the cave may be rather of the same sort as that in Michael Scott's grave at Melrose, "No earthly flame blazed e'er so bright, It shone like Heaven's own blessed light." "Lay of the Last Minstrel," Canto ii, 18, with Sir Walter Scott's notes on such caves and magic lights, "Poetical Works," vol. vi, Cadell's edit., pp. 249–255. And for Ibrahim Pasha's box on the ear, compare that the Dwarf felt when he opened Michael's mighty book, "When on his cheek a buffet fell, So fierce it stretched him on the plain, Beside the wounded Deloraine." Canto iii, 9, and note, pp. 260, 261.)—These stone effigies would in course of time become covered with a green discoloration and deposit, owing to the dampness of the cave, and hence the patriarchs' bodies are described by those who have seen them since that date to be "clothed in green garments." The wind also mentioned by all who have visited the inner cave would naturally be draughts of cold air that enter from the hole at D, and would blow through the caves towards the apertures in the pavement above. This supposition regarding the sculptured slabs would agree also with what Jelal ed Deen, quoted by Fergusson, p. 144, says, that "below the patriarchs lie in the flesh on their tombs with splendid beards"; and with what each of the Moslem visitors, quoted by Le Strange, further aver. These incised effigies would then have remained practically undisturbed since 1187 A.D., until Ibrahim Pasha's abrupt intrusion. Rebekah's figure probably represents her with long hair and her hands on her bosom, or possibly holding some symbol. One glance at this figure beneath the flash of the lamp held by the intruding Pasha reminded him of the attitude he had seen women assume when combing their hair in his own harem; he was suddenly smitten with a natural sense of the ghastly impropriety of looking upon another man's wife--and he "the jealous" patriarch Isaac—in such a position, and started at the shock, as if his ears had been boxed, and fell to the ground in a fit. No other Moslem visitor had ever looked upon the effigies of the wives of the patriarchs, the latter they had seen, but they say that they had been deterred from gazing on those of the women, by "a voice that cried out" in their conscience, saying, "Beware, for it is the Harem." This supposition regarding the sculptured slabs in the crypt accords with what at least three, if not more, independent witnesses report; and is, at any rate, more satisfactory than to merely assert that what the witnesses say, "make it certain they either never descended, or invented what they are reported to have seen" (Fergusson, p. 144).

7. It would appear that the spring rains were late that year, none having fallen till March, and that the preceding autumn rains had been scanty. This would cause the *sebîl* to run dry. The spring rain fell copiously the three days while Reubeni was at Hebron at the end of Adar.

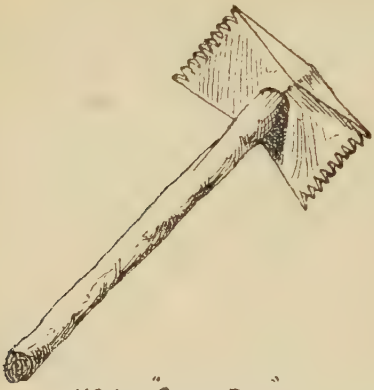
This was taken as a favourable omen by the guardians after they had allowed him to pray in the church. The guardians had expected some sign from Heaven, as their successors would to-day, to follow the admission of a stranger to the Haram. Water was coming into the *sebîl* through the conduit from the country outside ("the distant land"). This conduit for bringing water into the quadrangle of the Haram is also expressly mentioned by Mukadessi (Pilgrims' Text Society, p. 51). This acceptable fall of rain after four years' drought appears to have much impressed Reubeni, for it probably prompted the question he afterwards asked of his brother Jews at Jerusalem (p. 52); compare Joel ii, 23.

STONE DRESSING OF JERUSALEM, PAST AND PRESENT.

By Archibald C. Dickie, A.R.I.B.A.

Comparatively little is known about the tools used and the method of handling them by the workers in stone of old Jerusalem, hence I venture to submit to the readers of the *Quarterly Statement* the result of my observations on the subject in the city and elsewhere.[1] In archæology, facts, whether of incidental occurrence or otherwise, are necessarily the only scientific data, from which important deductions may be drawn. My investigations have been strictly pursued with a view towards the possibility of characterising the different styles of masonry discovered in the present excavation to the south of the city as indicative of definite periods. Starting on a basis of certain popular ideas of the characteristic features of the Jewish, Herodian, late Roman, and Crusading stone dressing, I made careful notes on every style of masonry as it was uncovered, at the same time noting its position and bonding, in the hope of coming to some definite conclusion as to relative periods. As the work proceeded, every new piece of masonry raised a new complication, styles mixed together and alternately preceded and succeeded one another, until the whole question became so hopelessly confused that I was forced to turn in another direction to enable me to systematise my notes that they might be of any archæological value. A study of modern buildings and occasional association with native workmen gave me the key, and I decided that I must commence with the dressing of to-day and work backwards. Before touching on ancient masonry, therefore, I will give a list of the principal tools used by the masons of the present day, with short descriptions of the methods of handling them. The European hewer stands over his stone and works

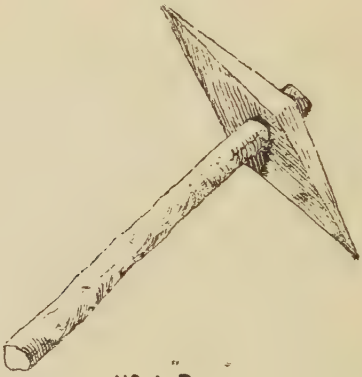
[1] Dr. Schick, in his paper published in the *Quarterly Statement* for 1893, p. 198, *seq.*, gives a good deal of information respecting stone-cutting and stone-dressing tools.



No 1 "COMB PICK"

No 2
"CHISEL PICK"

No 3 "MASHEY"



No 4 "PICK"

No 5 "DROVING IRON"

No 6 "MALLET"

down on to it, but the Eastern squats in Oriental fashion and sets himself parallel to the plane on which he operates :—

The "comb pick."—This tool is worked by a short stroke, which alights obliquely on the stone, forming incisions measuring from 1 inch to 2 inches in length each stroke. Four sizes are used, 5, 7, 8, and 9 teeth to the inch ; the handle measures about 16 inches long.

"Chisel pick."—Worked with a "mashey"—upward slanting stroke ; the head of the "mashey" is cut obliquely to suit the position of the operator, makes a rough "pock-marked" dressing, and is also used for roughly taking down the face of a stone, in which case the effect is deep, flaky, and irregular.

"Pick."—Gives the same dressing as "chisel pick," "pock-marking," and is used for finer work ; gives a shallower and more delicate effect ; used with a short, straight stroke ; handle 16 inches long.

"Droving iron."—Worked with a wooden mallet, in the same manner as an English droving iron, but as the tool is sharper and is placed more perpendicularly on the stone, the furrows are deeper and closer. Each furrow is worked in sections of the width of the tool.

"Quarry pick."—Used with a long curved stroke, and makes long irregular incisions at fairly regular intervals. Only used in the quarry for cutting stones from the rocks.

Such, briefly, are some of the hewers' tools used in modern stone dressing. Careful examination of those dressings, and comparison with what has been found in the excavations, have, from their almost identical similarity, proved to my mind that the same tools used in dressing the stones of the city walls of ancient Jerusalem are to-day used in the same manner in the erection of the hundreds of edifices which are so fast crowding out her ancient monuments.

That these tools have been more or less continuously used from the time of their introduction into the hands of the artificer who, from century to century, has continued to add his testimony to the city's ancient glory, seems therefore a natural inference. The following notes on the tooling of stones from ancient times to the present day will support this theory, and may, I hope, be in some way valuable in influencing archæological conclusions.

I will commence with what is popularly called Jewish masonry, *i.e.*, large stones with projecting bosses and back-set margins. This is the most characteristic class of work of the recently discovered south wall. The bosses vary in projection from 10 inches to 2 inches, and show no tool marks on the fractures, they are roughly squared with irregular margins, varying from 3 inches to 5 inches in width, which are usually finished off by a comb-pick dressing. In some cases the margins have been dressed off with a $\frac{1}{2}$-inch drafting chisel, and in a very few instances they are simply chisel-picked (*see* specimens A, B, C, D, E, in *Quarterly Statement* of July, 1895, and in specimen Q in *Quarterly Statement* of October, 1895). The heights of these stones vary considerably, but the

average is from 21 inches to 25 inches, and they are, comparatively speaking, roughly squared and bedded, although the beds and joints are well cleaned off. An earthy mortar with a very small percentage of lime, has in some cases been used, but its absence is more general This class of masonry can be seen immediately on the top of the great course of the Haram Area wall. I have seen it in the wall abutting on Hadrian's Arch, at Athens, and I fancy the Roman wall at Gloucester, described in last *Quarterly* by Mr. Bellows, is of the same character. The walls of the castle at Banias are built of similar stones, except that in many cases the faces of the bosses show rough tool marks and the margins are pick dressed. To-day, boss and margin dressing is used in Jerusalem, and although the stones are of much smaller proportions, the same principle continues.

Specimen D, in the *Quarterly* Report of January, 1896, shows a style of masonry of very different character. The proportion of the stones is similar, and a few have slightly projecting centres of not more than $\frac{1}{4}$ inch. The margins are carefully comb-picked, and the centres are pick-dressed. The stones are perfectly squared and set. Vertical joints are worked fine and true, and beds are cleaned off smooth, without lime. A look at elevation CD, Plate I, will at once show from the bonding that it is the earliest piece of masonry in this side of the tower, and that the introduction of the margin and boss stones is of a later date.

It is now pretty generally accepted by the best authorities on Jerusalem topography that the wall to which this tower belongs was in existence at the time of the siege of Titus. Dr. Bliss, in his report of January, 1896, gives good reasons for supposing that this wall was never again restored after its destruction, viz., from the accumulation of *débris* between it and the superimposed wall (*see* Section AM, Plate I), which may date from the two periods of Hadrian and Eudoxia. Three distinct periods are shown in this tower. The latest face—built of two styles, viz., rough boss and comb-margin stones, and chisel-pick centres and comb-margined stones (the latter evidently re-used), and distinctly shown by the straight wide vertical joint—therefore belongs to a period previous to 70 A.D. Given that it may date to a Herodian or late Jewish period, the intermediate restoration of the same class of masonry might belong to a middle Jewish period. This throws the finely dressed piece of masonry I have just described back to very early times. Its beautiful working suggests a leading historical period, when the chisel spoke while the sword lay dumb, and is akin to time of "costly stones according to the measure of hewed stones, sawed with saws within and without, even from the foundation to the coping" (1 Kings vii, 9).

This example clearly shows that comb-margin and rough boss was used after pick-centre and comb-margin dressing. Yet the tower found beside the gate near Siloam (*see Quarterly* Report of July, 1895, Specimen D), illustrates exactly the reverse. Here the beds and joints are not worked quite so fine as in the former instance and are set in lime, but perfectly squared and set straight and true ; the lime joints are neatly

drawn, uniform throughout, about ¼ inch wide. The same pick-centres and comb-margins are observed built along with comb-margins and rough boss dressing—both *in situ*—and this tower is evidently a later addition to the wall (built of rough boss and margin stones), as the latter —which at that point is plastered—runs behind the projection, leaving an open joint of about 1 inch wide.

Two such examples give a striking illustration of the freedom with which the ancient builders used their tools. Chisel-pick centre with comb-pick margin precedes comb-pick margin with rough boss dressing, which latter, in its turn, precedes, and is also contemporaneous with, the former. Comb-pick margin with chisel-pick centre dressing occurs on the stones of the castle discovered outside the wall and gate at Siloam (*see* Report of October, 1895), on Crusading work, in the Turkish walls of the sixteenth century, and to-day the same style of dressing is seen.

It is interesting to note that the *picked margin* (in distinction from the *comb-pick* margin) with the rough boss occurs only in a few isolated cases in the south wall, and, excepting one instance, none have been *in situ*. The boss and margined stone in Specimen OK, *Quarterly* Report, January, 1896, is of this class, and is a fair sample of the isolated positions in which they have been found. The tower discovered near the English cemetery (*see* Report of October, 1894) is the one solitary example *in situ* in the whole line of wall from that point to Siloam. The margins are *pick* dressed, and the bosses are rough and show no tool mark. The courses average 27 inches high, and the stones, though roughly jointed, are set true in lime joints about ½ inch wide. The boss and margined stones in the lower courses of the wall projecting from the Haram Area are similarly dressed, although of much larger proportions, and some of the stones built into the present Turkish south wall of the city are also of this class. The fact that all these stones are of the hard "Mizzeh" beds, however, probably accounts for this peculiarity.

The beautifully dressed and jointed stones in the walls of the Haram Area and the lower courses of the Jews' wailing place, usually assigned to the time of Herod, stand unique in their character. Only once has this class of dressing been found in the excavations, and that on a fragment built into a later restoration of the wall, beside the projecting chambers described in Report of January, 1896. It is a fragment from earlier work and is built along with boss and margin stones. The sunk margins, and about 1 inch all round the slightly projecting centre of this style, is worked over with the comb-pick, the centres being finished off with a very shallow picking, much more carefully and delicately executed than any of the picking I have before described. The proportions of these, as can be seen from Sir Charles Warren's records, are huge in comparison with what have been found in the present excavations.

The stones in the upper later wall (*see* Reports of January, 1895 and 1896) may be described in general as even-faced dressing without margins. A few have picked centres and margins, but the characteristic stones are cleaned off plain, either with the comb-pick, or a long stroke-toothed tool,

which dresses in irregularly curved drafts of about $\frac{5}{16}$ inch to $\frac{1}{4}$ inch wide, varied in direction, presumably to suit the position and convenience of the hewer. A few plain chisel-picked stones are also seen (*see* specimen in Report of January, 1895). Joints are well-worked and the setting is true. The comb-picked stones are similar to the stone under the springer of Robertson's Arch, and to a few stones in the Haram Area wall, where the city wall projects from the Mosque el Aksa. These latter, from their position and bonding, evidently existed before the Byzantine Arch, which has been inserted into the wall at that point. The upper courses of the Jews' wailing place show similar dressing. Plain-faced *chisel*-picked stones are also built along with comb-picked in the upper courses of the wailing place, and similar comb-pick and chisel-pick plain dressing can be traced up to the present day.

Quarry-picked stones occur in all ages.

The parallel furrowed tooling, usually assigned to the Crusading period, has been found nowhere in the excavations except in the wall which was uncovered in the Augustinian property, and which is undoubtedly of that late period. I have never seen it in earlier work, but in more modern work it crops up continually, and only a week ago I sat beside a native workman while he completed the dressing of a stone which, with a little weathering, would have taken a place with perfect security in the recently discovered wall. The "droving iron" was the tool used. In a few cases the same method of use with a toothed tool has been employed, which gives the furrowed effect with a combed detail. A diagonal direction is usually followed in the dressing, but this is not essentially necessary to class it with Crusading work, as there are many perpendicularly furrowed stones built in juxtaposition to diagonal work.

In last *Quarterly Statement*, Mr. Bellows calls attention to the back-setting or battering of ancient building, and quotes Viollet le Duc, in referring to the wall at the Haram Area, as considering back-setting an indication of "very high antiquity," consequently adding this as additional proof that this masonry is Phœnician. Allow me to give the following facts :—

The wall emerging from the Jewish Cemetery (*see* Report, July, 1895) stands four courses high and is back-set on each course from 2 inches to 5 inches. A part of the tower found near gate at Siloam is back-set on each course for six courses from $\frac{3}{8}$ inch to $\frac{7}{8}$ inch. The tower in the lower wall (*see* Report of January, 1896) at south-east angle is back-set three courses, 2 inches on each course. Some of the towers of the existing Turkish south walls are back-set in the same manner, and at Gloucester Mr. Bellows has found the same peculiarity.

The stones of the old south wall are usually laid on their natural beds, but there are many examples of their being set on hem.

These are the results of my investigations, and whatever light may be shed on the question, it does not, I am afraid, assist much towards defining the date of a building by its dressing. On the contrary, it tends to encourage scepticism as to the possibility of fixing periods by any hard-

and-fast rules of masonry alone. Unlike the case of Cyclopean polygonal masonry, the examples I have quoted show no line of demarcation, not even a period of transition. Each succeeding style has mingled with its predecessor from the time of its introduction; boss and margin work may have been used in early Jewish times, but was undoubtedly used in later Jewish, Roman times, and afterwards; comb-pick margin with pick-centred dressing was certainly used contemporarily with the boss and margin, and may have been used before. Quarry-pick dressing is universal. The delicate pick-centre and comb-pick margined dressing of the Haram Area is certainly characteristic of one great building period, such as that of Herod might signify. The plain-faced, comb-pick, and chisel-pick styles may have been introduced into Jerusalem in Roman times and have been used since. The furrowed Crusading dressing seems alone to definitely date its origin, and its after-use is beyond doubt. Ornament, characteristic mouldings, or plans, are all sufficient data on which to base the date of buildings. Dressing is an indication, combined with peculiarities of setting or jointing its evidence becomes most valuable, but unless backed by some such auxiliary as position, pottery, or the like, simple masonry is a frail basis on which to found archæological deductions in Jerusalem.

THE CAMP, JERUSALEM,
August 17th, 1896.

THE QUALITY OF THE WATER IN JACOB'S WELL.

By Dr. HENRY BAILEY.

PROFESSOR GEORGE ADAM SMITH, of the Free Church College, Glasgow, has forwarded the following letter from Dr. Henry Bailey, on the qualities of the water in Jacob's Well, and why the Samaritan woman went there to draw. Dr. Bailey was for three years medical missionary of the Church Missionary Society at Nâblus :—

"BISHOPSTOKE, NEAR SOUTHAMPTON,
"*October 15th*, 1896.

"The question as to why the Woman of Samaria should have gone to such a distance as Jacob's Well, when a copious fountain gushed forth from the mountain side close by, does not present any difficulties to anyone familiar with the locality and people.

"Apart from the sacred character of the well, which some might suppose an attraction, its waters have a great local reputation for purity and flavour amongst the natives of El 'Askar and Nâblus. The excellence of various supplies of water and their respective qualities are a favourite topic of conversation with Easterns, and in a hot climate, and where other beverages are almost unknown, it is not surprising to find that the

natives are great connoisseurs as to the quality of water. Pure water is the universal beverage, in Mohammedan districts at any rate, coffee, lemonade, &c., being reserved solely for guests and special occasions. The people, therefore, as we should expect, have a keen appreciation of the various qualities of different waters, to a degree which we can scarcely realise in more favoured climes.

"The numerous springs of water at Nâblus are, from the nature of the soil, mostly of very *hard* water, very '*heavy*,' as the natives express it. They not unjustly attribute many of their complaints to this cause, and speak with longing of the 'light' waters of Gaza, and various other places.

"Now Jacob's Well has a reputation amongst them of containing cool, palatable, and refreshing water, free from the deleterious qualities of their other supplies of water. Frequently I have been told, that after eating a hearty meal (and a hearty meal with them is something appalling!) a good draught of water from this particular well will disperse the feeling of abnormal fulness in a remarkably short space of time, and, moreover, make one ready for another good meal in an incredibly short space of time.

"The copious fountain at El 'Askar gushes forth from the very bowels of rocky (limestone) Mount Ebal, and is therefore of particularly hard ('heavy') water. The woman would, therefore, gladly take her jar to this celebrated well for a supply of drinking water.

"Although 30 feet and more of rubbish has found its way into Jacob's Well, the supply of water even now lasts till the month of May, most years, or even later. The source of supply to this well has not yet been accurately ascertained, but it is doubtless greatly due to percolation and rainfall. The latter may account partly for some of its special qualities as to 'lightness' (softness).

"It is not uncommon in the East to send to a great distance for a supply of drinking water, as you may know, especially by those who can afford to do so. The woman of Samaria may, if poor, have been hired to convey the water for some richer person. When at Nâblus I used to send to a certain spring some mile or so from my house for drinking water, and soon quite a regular little cavalcade repaired to this spring every morning and evening to supply the richer families with water which the English Doctor recommended! Bishop Blyth, of Jerusalem, sends three miles from Jerusalem, to Ain Karim, for his water supply."

LIBNAH.

By Lieut.-Colonel Conder, LL.D., R.E.

The site of Libnah remains uncertain. It indicates the "white" chalk of the Southern Shephelah, and it was taken by Joshua (Joshua x, 30) after Makkedah and before Lachish and Hebron. It was a royal city (xii, 15), and was attacked by Sennacherib coming from near Jaffa after the siege of Lachish (2 Kings xviii, 17; xix, 8). These indications are not very precise, and in the Onomasticon it is not clear that the site was known, but it cannot have been very far from Lachish. The large mound of *Tell en Nejileh* has been suggested, and is no doubt an ancient site, but the names have no connection. There is, however, a ruin about 10 miles south-east of Lachish (*Tell el Hesy*), called *el Benâwy*, which would be a possible corruption of the name Libnah.

Sennacherib might not unnaturally advance in this direction, where a large valley leads up into the Judean mountains, and would reach it coming from the north after Lachish. Joshua, on the other hand, must have passed by Lachish, and returned to take it before ascending to Hebron. There is no known name in the plains of Philistia which can represent Libnah, but el Benâwy is a ruin near the foot of the hills.

THE VALLEY GATE AND THE DUNG GATE.

By Rev. George St. Clair, F.G.S.

Dr. T. F. Wright spends two-thirds of his letter to show that Nehemiah, in enumerating the gates of Jerusalem, proceeds by the north and west to the south. As this is evident on the face of the description, and is assumed in my book on "Buried Cities," I do not know why he should waste his space to prove it. The question was rather whether Dr. Wright's hasty adoption of two newly-discovered gates as the Valley Gate and the Dung Gate, was so sure as to justify him in crowing over "all the geographers." His wall and gates seem to be post-Christian, and are not necessarily on the same sites as Nehemiah's.

In my book I show good reasons for putting the Valley Gate near the present Jaffa Gate, in the middle of the west wall; and in this I agree with Lewin, Schick, and others. The Dung Gate would then necessarily be south or south-east of the Valley Gate. Professor Wright thinks he finds the Valley Gate near the south-west corner, and in order to support this position quotes Nehemiah as stating that the Dung Gate was a thousand cubits further east; whereas, as he now confesses, "the text does not say east" at all.

My opinions published in 1891 were founded on a study of all the results of exploration and excavation up to that time. I am ready to revise them should Dr. Bliss's work disprove any of my suggested identifications; but at present that does not appear to be the case.

MEDIÆVAL TOPOGRAPHY OF PALESTINE.

By Lieut.-Colonel Conder, LL.D., R.E.

In preparing a new map of the Latin Fiefs in Western Palestine, I have added a few names to those mentioned in my former paper (January, 1890), which are, as far as I can ascertain, not yet fixed :—

1. *Caphar Suma*, belonging to the Abbey of Tabor in 1103 A.D., is probably *Kefr Sumei'a*, west of Toron.

2. *Meschia*, of the same list, apparently is *Mes-hah*, near Tabor.

3. *Bene Habeth*, of the Holy Sepulchre in 1114, is perhaps for *Beni Hârith*, north of Jerusalem.

4. *Luceri*, of the Hospital near Mirabel in 1122, perhaps the ruin *Sh'aîreh*, west of Râs el 'Ain.

5. *St. Job*, belonging to St. Mary of Jehosaphat in 1129, is the present *Deîr Eyûb*, near Bâb el Wâd.

6. *Gemmail*, of the same list, will be *Jemm'ain*, south of Nâblus.

7. *Jebethza*, of the Hospital in 1129, probably *Jebâta*, west of Nazareth.

8. *Aldefie*, or *Hautfie*, of the Hospital in 1131, is perhaps another form of *Dufeis*, south of Carmel.

9. *Caper Salem*, of the same list, is perhaps now *Selmeh*, near Jaffa.

10. *Hale*, of the Hospital in 1136, is apparently *Yâlo*, near Amwâs, which may be the *Meîmes* of this list.

11. *Bothme*, of the same list, is *Deîr el Butm*, near Blanchegarde.

12. *Charraubet*, of this list, is *Khurâbeh*, near Ramleh.

13, 14. *Helhtavvahin*, of the same list, is probably for *Deîr et Tahûneh*, near 'Ain Shems. This would indicate that *Deîr el Cobebe* is not Kubeibeh, north-west of Jerusalem, but more probably *El Kubâb*, near Ramleh.

15. *Huxemia*, of the Holy Sepulchre in 1132, near Kâra and Jabbûl, is probably not Ikzim, but the ruin *Hakeimîyeh*, north of Beisân.

16. *Tamarin*, of the Hospital in 1168, is probably *Tumrah*, north of Gaza.

17. *Vuetmoamel*, or *Odomamel*, probably stands for *Wâdy en Naml*, north-west of Jerusalem.

18. *Lachamberlaine*, a place near Subebe (or the Castle of Baniâs), may have been corrupted to *es Sanbarîyeh*, a place near Tell el Kâdy.

19. *Sida*, belonging to St. Sion in 1178, is *Saida*, north of Samaria.

20. *Caforana*, of the same list, is probably *Kefr 'Ana*, near Lydda.

21. *Casert*, of the same list, is *Kusrah*, near Val-de-Curs.

22. *Ancre*, granted to Jocelyn III, of Courtenay, in 1180, probably stands for *'Amka*, south-east of Acre.

23. *Megar*, held by the Hospital in 1182, is *Mughaîr*, a village south of Cæsarea.

24. *Darchife*, of the Pisans in 1188, is *Deir Kîfa*, in the mountains south-east of Tyre.

25. *Samaritano*, of the Hospital in 1200, is *Zummarîn*, on Carmel.

26. *Zebedel*, of the same list, is *Zebdah*, on the low hills south-east of Carmel.

27. *Danehyle*, of the Teutonic order in 1220, is probably *Daniân*, near the Ladder of Tyre.

28. *Lebeyne*, which stands next on the same list, is not St. George Labeyne (now el B'aneh), but *Lebbâna*, close to Daniân.

29. *Achara*, of the same list, is probably *'Akrîth*, in the hills to the east.

30. *Bethama*, of the Church of Bethlehem in 1227, was near Ascalon —probably *Beit Tima*.

31, 32. *Batiole*, of the Venetians in 1243, probably *Beit Hulei*, south of Tyre, near *Mensora*, now *el Mansûrah*.

33. *Husye*, of the same list, is probably *el Ezziyeh*, in the same district.

34. *Michel Serquey*, of the same list, is probably *Abu Serkîn*, further east.

35. *Quepsene*, of the Hospital in 1254, east of Casale Robert (Kefr Keuna), is clearly *Kibshâni*, in the required position.

36. *La Tor*, of the Hospital in 1260, is probably *Tôrah*, near Tyre.

37. *Asrifia*, belonging to Margaret of Tyre in 1285, is now *Serîfa*, in the mountains east of Tyre.

38. *Medjadil*, of the same list, is now *Mujeidil*, not far from the preceding.

39. *Deir Amrân*, of this list, is probably now *Neby 'Amrân*.

40. *Kafar Nai*, of this list, is now the ruin *Kefr Nai*, south of the Kasimiyeh ravine east of Tyre.

Out of some 700 places mentioned in the twelfth and thirteenth centuries in Western Palestine, about 500 are now more or less certainly located, and will nearly all be found on the map accompanying the "Latin Kingdom of Jerusalem." Of the unknown places, about 80 were in the hills of Tyre, 20 others in Galilee, 20 more near Acre, 15 near Cæsarea, 30 in the mountains of Samaria and Judea, and a few near Jaffa and Jerusalem, while a very few are not so described as to show in what part of the country they lay.

TOPHETH AND THE KING'S GARDEN.

By Rev. W. F. Birch, M.A.

The current excavations are flashing fresh light on Jerusalem. Let it be used.

The above were, I believe, quite distinct localities according to the Bible; for Topheth (Jer. vii, 31) is said to be in the Valley (Heb. *gai*) of the son of Hinnom, while the indications given in the Old Testament require the King's Garden to have been in the *nachal*, *i.e.*, brook Kidron, in its wider part reaching to Joab's well, close to En-rogel.

Since topographically important questions are affected by Topheth and the King's Garden being correctly laid down, these two positions must be proved.

Topheth.

It has already been proved (*Quarterly Statement*, 1882, 55; 1889, 38; 1893, 330) that the Valley of Hinnom was the central valley at Jerusalem, the Tyropœon which reached to Siloam being part of the said valley.

Ahaz (2 Chron. xxviii, 3) used Hinnom for cruel, idolatrous worship, and Jer. xxxii, 35, states: "They built the high places of Baal, which are in the Valley of the son of Hinnom, to cause their sons and their daughters to pass through the fire unto Molech." As the Old Testament in regard to Jerusalem is precise and consistent in always applying to Hinnom no other term than *gai*, and never applying *gai* to the *nachal* Kidron, or to the south-west valley (called the King's Dale, *emek*), *i.e.*, Wady Rabâbeh, it is most satisfactory to find that Jeremiah, when previously he alludes to the worship of Baal, connects it with Hinnom by using *gai* for the valley which he names in ii, 23: "How canst thou say I am not polluted, I have not gone after Baalim? see thy way in the valley." He also predicts (xxxi, 40) that certain polluted places, both outside and near Jerusalem on the west, south, and east, should become holy, and yet he makes no mention whatever of Hinnom, which had already been polluted. Why this omission? The reason clearly is that the Valley of Hinnom passed through and was inside his Jerusalem. Obviously a valley within the city could not be treated as outside it.

This last passage requires the whole Valley of Hinnom to be practically within the city, and therefore Topheth, a part of it, must also be within the city. Now the prophet, in foretelling the miseries of the siege and capture of Jerusalem, says (vii, 32; xix, 6–11): "The days come that it (Topheth) shall no more be called Topheth nor the Valley of the son of Hinnom, but The Valley of Slaughter: for they shall bury in Topheth, till there be no place to bury," or (better in margin R.V.) "*because* there shall be no place else." If Topheth had been outside the city during the siege of Zedekiah, how could the Jews bury there at all while the Chaldæans were round about it? But with Topheth and the Valley of

Hinnom *inside* the wall of the city, all is clear and intelligible. In order to enclose these two localities, there must, however, have been a wall stretching across the *gai* of Hinnom at its *opening* into the *nachal* Kidron, and this (be it noted) is the very place where an embankment across the *gai* now exists (*see* plan, 1896, p. 298), and where Dr. Bliss, in May, 1895, reported, or actually discovered (and partly traced), a wall running (practically) parallel to and near the embankment. This find is a splendid gain: since Jer. vii, 32, requires, as we saw, a transverse wall at the mouth of the Valley of Hinnom, and excavation shows the remains of it still existing. I am most thankful for this discovery, even though it makes such havoc of some of my notions that Neh. iv, 10, aptly describes the result.

I may observe, in passing, that Josephus never names Topheth or the Valley of Hinnom, in strict agreement with the prediction that such names would cease to cling to the place, which would be known instead as The Valley of Slaughter (הַרְגָה, *haregah*). It is curious that in "Ant." IX, x, 4, he speaks with Oriental additions of a place before the city called Ερωγη (*erogē*), which was blocked by a falling rock in Uzziah's reign. Such an obstruction might easily occur in the narrow Tyropœon just north of Ain Silwân, but not so well anywhere much further south. Topheth seems to me to be proved not to have extended outside the transverse wall in the Valley of Hinnom.

The King's Garden.

Without examination I assumed (1884, 77), and have since thought, that this was in the Valley of Hinnom. Now I see the error.

To Solomon the Magnificent the more open Kidron Valley presented a far more desirable position than did the smaller Hinnom, wherein he might delight himself with the charm of an Oriental, viz., a garden planted with trees and provided with water. True: Jerusalem had no brimming Abana in which to glory, but when from En-rogel (1889, 41) the gushing brook overflowed through the midst of the land, the inhabitants of the Holy City, then as now, could keep festive time and enjoy their holiday in the King's Garden (placed here also by Josephus) on a scale that was quite impracticable in the Valley of Hinnom.

To the Song of Songs we owe the unique passage that distinctly locates the garden of (Solomon) the King in the *nachal* Kidron, viz., vi, 11: "I went down into the garden of (wal) nuts, to see the green plants of the valley (*nachal*)." In this book the mention of daughters of Jerusalem and Zion and the watchmen in the *city* beyond question places the scene at Jerusalem, and therefore the *nachal* must be the *Kidron*. Most suitably also is the comparison to "a spring shut up (or barred), a fountain sealed," introduced at this place (iv, 12), as if it had been suggested by the *genius loci;* for close to Joab's Well, in the descent to the sources of the overflowing brook of En-rogel,

Sir Charles Warren discovered a concealed entrance still "shut up," and the staircase below walled up, with the stone plug in its proper place (Sir Charles Warren's Letters, pp. 141–153, 1869, "Recovery of Jerusalem," 1871, p. 260, *Quarterly Statement*, 1889, pp. 41, 47). Then, too, the invitation to the north and south winds to blow upon my garden (iv, 16), most appropriately fits in with the Kidron Valley lying north and south (Bonar's "Land of Promise," 162).

It has thus been proved conclusively (so far as I see), not from guessing Josephus or erring Jerome, but from Biblical evidence, that in the time of Jeremiah Topheth was in the central or Tyropœon Valley within the outer wall of Jerusalem, and the King's Garden in the eastern valley, *i.e.*, the Kidron, outside that wall. Also it is clear that the city wall crossed Hinnom near the said embankment.

Now let us turn this fresh light upon the obscure questions of the right position of the Fountain Gate, the Wall of the Pool of Siloah by the King's Garden, the Stairs that go down from the City of David, the Sepulchres of David, and the Pool that was made (Neh. iii, 15, 16). From what I have read, I am now driven to the following view. As we must accept a wall alongside the embankment in Jeremiah's time, it is obviously straining out the gnat to demur to Nehemiah's Wall having enclosed the site of the gate near the tower on the plan (p. 298).

The Fountain Gate.—This may fitly be located at the said gate, at the south-east corner of Jerusalem, so named from leading to En-rogel.

The Wall of the Pool of Siloah by the King's Garden.—No other words could better describe the transverse wall across Hinnom, if the Old Pool on plan be identified with the Pool of Siloah, for the King's Garden begins immediately east of the wall. This agreement is most encouraging. In 1890 (p. 200) I took Nehemiah's Wall across the Tyropœon to be 100 yards higher up the valley.

The stairs that go down from the city of David.—Neh. xii, 37, adds, "They went up by the stairs of the city of David at the going up of the wall." The transverse wall takes us across the Valley of Hinnom to the south-east extremity of the Ophel Hill (so called). Here I expect Dr. Bliss will discover both ascending stairs and an ascending wall. Such would be a strong argument that we are on the right track.

Over against the sepulchres of David to (עַד = right up to) *the pool that was made.*—The sepulchres are now covered up, but I believe they were within (1879, 179) Hezekiah's wall and on the left hand of the stairs, if these kept close to the wall. Here is a most delicate piece of excavation, requiring much judgment. No doubt Dr. Bliss will prove equal to the occasion and finally discover the sepulchres. But we were on the way to *the pool that was made.* Where was this pool? It seems to me, after nineteen years' tedious search and repeated failures, that it must have occupied the site of the present upper Pool of Siloam south of Ain Silwân, only it was more extensive. In Isaiah xxii, 11, it is called the ditch.

Strangely these intricate points turn out to be much simpler than I

anticipated, and Note B in *Quarterly Statement*, 1877, p. 204, appears to be (so far as I can see) the right solution of the question, though I then only named an alternative course for the wall as possible, but did not see my way to accept it.

After this the King's Pool (Neh. ii, 14) easily slips into its proper place south of the Virgin's Fount (Gihon), getting its name from Solomon being there anointed. The ruins in this narrow part of the *nachal* apparently necessitated Nehemiah's dismounting.

Hezekiah's tomb was apparently near the stairs named above, though at a lower level than David's sepulchres; for 2 Chron. xxxii, 33, says they buried him in the ascent of (? to) the sepulchres of the sons of David.

I hope the reader will do his utmost to further these most interesting excavations, so that the Palestine Exploration Fund may obtain data for a correct plan of Zion, besides photographs of the various chambers in the royal catacombs.

Note B. "*Quarterly Statement*," 1877, *p.* 204.

Even on the admission (Note A) that the *pool that was made* was in the Tyropœon Valley, it might still be urged that the *lower* Pool of Siloam was the Pool of Siloah, and the *upper* Pool of Siloam was the Pool made by Hezekiah.

Such a view may possibly be consistent with the LXX rendering of Neh. xii, 37, Isa. xxii, 11, though the objections to it on other grounds seem to me very strong. If it could be maintained, then the line of the wall and stairs would have to be drawn from the north end of the embankment up the Ophel Hill, and the position of the Tomb of David altered accordingly.

18*th November*, 1896.

THE TEMPLE, THE CHURCH OF THE ASCENSION, AND THE FINDING OF THE CROSS.

By W. R. Lethaby, Esq.

In view of the approach of an important day of the year[1] in regard to Jerusalem, will you allow me to suggest through the *Quarterly Statement* the possibility of a connection between the Temple and the Ascension Church? The day I speak of is that of the Dedication of the Holy Sepulchre, September 15th.

The Temple was built round about the rock summit of Mount Moriah —"the mountain of the house," and it is generally admitted that the rock now covered by the Arab Dome ("the Temple of the Lord" in the

[1] Written September 1st, 1896.

Middle Ages) defines the east-west axis of the Temple. The rock formed the basis for the Great Altar or for the Ark. According to the Talmud, not only the Temple, but the world itself was grounded on the stone called *Foundation*. It was the centre of the world and the cover stone of the entrance to the lower world. These legends elucidate one side of the much-discussed saying of Christ—"Thou art Peter, and upon *this rock* I will *build my church*, and the *gates of hell* shall not prevail against it." The reference was to the well-known fact that the Old Temple was built on an actual rock which, covering the "well of souls," formed the gate of hell. A parallelism was thus suggested between the old Temple and the Church of Christ.

The eastern and entrance front of the Temple exactly faced the summit of the Mount of Olives, of which there was an uninterrupted view from the interior of the Temple.

Now, the Church of the Ascension stands on or near the summit of the Mount of Olives; but Dean Stanley has pointed out that the site does not seem to have been accepted as that of the Ascension in New Testament times. As to its position in relation to the Temple, the following remarkable passages occur in "Felix Fabri":—"The Mount of Olives is properly called the Mount of Lights, for it is first lighted by the sun. At dawn it is straightway lighted by the sun's rays. . . . . When the sun rose and passed over the top of the Mount of Olives, the first rays which it sent forth entered into the door of the outer tabernacle . . . . and made their way even to the Ark of the Covenant which was lighted up by the first stroke of the sun's rays. Now the Church of the Ascension always receives the first rays and it passes them on to the Temple of the Lord. . . . In the place where the Lord ascended the priests of the old law were wont every year to make a great fire, and they used to bring out a red heifer and they burnt it there" (i, 495–6). "The Church stands opposite, but much higher than the Temple, and directly to the eastward, so that *at the equinoxes the rising sun appears as it were to rise out of this church and to go up from it, as I have often watched it doing. When I saw this I no longer wondered that the Church sings on the day of the Lord's ascension, 'Sing unto the Lord who ascendeth above the heaven of heavens in the East'*" (i, 487).

We can hardly doubt from this that the Ascension Church superseded some monument which served as a *pointer* to the Temple, and that the sun's "*rising*" behind it once a year would probably coincide with one of the great annual feasts, such as that of the dedication of the Temple or the slaying of the heifer. I need not refer here to the general theory of the orientation of temples, so fully worked out by Professor Norman Lockyer, Mr. Penrose, and others. For a "pointer," compare Stonehenge and see E. Burnouf's "Légende Athènienne" on the Parthenon.

The Holy Sepulchre and the Ascension were both built by Constantine. The sepulchre seems to have been intended to form the Christian centre of Jerusalem; the earliest writers call it the New Jerusalem. It would be interesting, not only to verify Felix as to the temple, but to determine

what day's sunrise the axis of this church points to; its dedication was on September 15th. Now this seems to have been a great day in Jerusalem independently of the Church. Arculf, for instance, tells us that a large fair was held on this day, which was immediately followed by great rain.

From the number of bishops called together for the dedication of the "New Jerusalem," it is evident that the day must have been decided upon long in advance, and there is good reason to think that the day was intended to be that of the dedication of Solomon's Temple. St. Silvia says:—"The Dedication Festival of these holy churches (the Martyrium and Anastasis) is observed with the greatest honour, *since the Cross of the Lord was found on that day.* For so it was ordained that the day on which first the above-mentioned holy churches were consecrated should be the day on which the Cross of the Lord was found, that it should be thus observed with all manner of joy. And this, too, we find in the Holy Scriptures: *for that was the day of dedication on which holy Solomon, when the house of God which he had built was completed, stood before the altar of God and prayed.*" This was written only about 50 years after the building of Constantine's Basilica, and is the first clear account of the finding of the Cross. The Cross was found deep down under the church, and so was most probably discovered, in any case, after the excavations had been made. The finding of the Cross occurred on the day of the dedication (which had been independently arrived at as following that of Solomon's Temple), or possibly the evening before, as the Feast of the Invention of the Cross is celebrated by the Eastern Church on September 14th.

It seems to follow that this discovery of the Cross was arranged beforehand.

2, Gray's Inn Square, W.C.

WHERE ARE THE SACRED VESSELS OF THE TEMPLE?

By Jas. Simpson, Esq.

Assuming that the golden table and candlestick which figured in Titus's triumph were restored by Justinian to the holy city, and may yet be found there: were these vessels actually used in the worship of the last temple, and in what degree do they resemble in size, shape, and design their prototypes of the tabernacle, or the later vessels made for Solomon's temple? Much of the interest attaching to them will depend on the answer to these questions.

Josephus relates ("Wars," vi, 8, 3) that during the assault of the upper city one of the priests "delivered to Titus from the wall of the holy house, *two* candlesticks *like to those that lay in the holy house*, with tables (*pl.*) and cisterns and vials, all made of solid gold and very heavy"; also "the veils

and the garments, with the precious stones and a great number of other vessels that belonged to their sacred worship." Does the expression which I have underlined imply that the two candlesticks were not of those in daily use in the sanctuary, but were part of a reserve kept in the treasure-chambers ? And if only one candlestick and one table were carried in the triumph, what became of the others and of the many other spoils enumerated, of which only the veils are distinctly specified as laid up after the triumph. If taken to Rome, did they fall into the hands of Alaric the Elder (A.D. 410), to be transported by him to Carcassonne in Languedoc ? (Canon Knight's "Arch of Titus," reprinted 1896.) And have they since perished ?

As it does not appear that Herod made any golden vessels for the temple he rebuilt, the spoils of Titus may date from B.C. 165 ; they cannot well be older, since Antiochus Epiphanes stripped the temple three years before of all its precious vessels and secret tresures and left it bare. Amongst these must have been that magnificent table which Ptolemy Philadelphus sent, with other gifts, to the high priest at Jerusalem (B.C. 280), when inviting aid for the translation of the Scriptures into Greek for his library at Alexandria. Josephus gives a minute description of this table, and says that Ptolemy would have made it five times larger than the one at Jerusalem, but fearing that it might then be unsuitable for worship he finally made it of the same dimensions, which, Josephus informs us, were 2 cubits by 1 cubit by 1½ high. If these were *sacred* cubits, its dimensions were exactly those of the table of show-bread made by Moses ; but in that case the copy, or copies, made by Judas Maccabæus B.C. 165 (supposing them to be similar to that sculptured upon the arch of Titus), must have been *greatly* reduced in size, judging by the delineations of Bartoli and Reland : for the former (assuming the stature of the erect figures in the foreground of the procession to be 6 feet) gives for the table a height of not more than 23·6 inches, and the latter of about 25·9 inches, including in each case the doubtful (?) base. This would imply a cubit of only 15·7, or 17·3 inches, while the sacred cubit of Moses and Solomon was not less than 25 inches, according to the careful determination of Newton. Excluding the base (which in Reland's drawing Canon Knight considers to be merely the platform on which the table was carried, and in Bartoli's artistic but fanciful etching simply a mistake), the height is reduced to 22·1 or 19·8, and the "cubit" to 14·7 or 13·2 inches ! From 1 Kings, vii, 48 ; 2 Chron., iv, 8 ; and Jos., "Ant.," viii, 3, 7, it appears that Solomon made 10 tables for the holy place, but one (more) *that was large* and made of gold, for the show-bread. This "large" table was probably of the same size with that belonging to the tabernacle ; and as the small tables would not be much less than 30 inches high, the large one might well have a height of 37½ inches, or 1½ sacred cubit, a height well suited to the purpose for which it was to be used.

When the temple was dedicated (2 Chron., v, 5), not only the ark, but the tabernacle itself and all its holy vessels were brought in ; but, excepting the ark, they do not appear to have been used in worship, but

only laid up as memorials. It is recorded that all the vessels of gold which Solomon had made for the temple were *cut in pieces* and carried to Babylon by Nebuchadnezzar, B.C 597 (2 Kings xxiv, 13). But the tabernacle and its vessels do not seem to have shared their fate : they were not taken to Babylon, and they are not heard of as existing in the second temple ; in which there was no authorised ark and no *shechinah*, perhaps no Urim and Thummim, nor the original breast-plate to which these appear to have been attached. Yet it cannot be reasonably doubted that at least the most sacred ark of the covenant and its precious contents, the tables of the law, have escaped destruction, and are being providentially preserved in a place of safety for a purpose yet to be revealed. Nor is there wanting some indication from Scripture as to the possible resting-place of these sacred relics.

The time of the destruction of the first Temple marks a very important era in God's dealings with Israel of both Houses, for then the denunciations of Jeremiah and Ezekiel upon Judah took full effect ; the land was overrun by the armies of Babylon, Jerusalem desolated, the Temple burned, the princes and people led into captivity, the king, after beholding the slaughter of his sons, blinded and carried to Babylon. Thus the kingdom of Judah was brought to an end, and David's throne overturned in Jerusalem. At the same time Jeremiah was granted his liberty, and some time afterward accompanied the spared remnant *and the King's daughters*, under the leadership of Johanan, into Egypt. But first, as we read in 2 Macc., ii, being warned of God, he carried the Tabernacle and the Ark and the Altar of Incense to the Mountains of Nebo, and there, in a cave in Mount Pisgah, he concealed these sacred memorials. This, we are told, is "found in the records," and there is no reason to doubt it may be true history (though a recent writer in the "Academy" speaks of the story as "legend" only). Moreover, there was a very sufficient reason why *Jeremiah* should be charged with the care both of these vessels and of the King's daughters above mentioned. His commission, as stated in Jer. i, 10, was two-fold : the first part, "to root out, to pull down, and to destroy, and to throw down," he had accomplished, as we have described ; the second part, "to build and to plant," was yet unfulfilled, but must inevitably be accomplished in his lifetime. If the prophet had died in Egypt, as some say, or, as others, in Jerusalem, where was the accomplishment of this mission ? In some country outside Palestine, where the House of *Israel* (not Judah) was already representatively settled, must the throne of David be rebuilt at this time. A *female* scion of David's line must, according to Ezek. xvii, 22–24, be the medium of this transference of the indestructible throne and sceptre to the "mountain of the height of Israel" ; and there the "tender twig" must take root and become a great cedar, that under its shadow all fowl of every wing may dwell. From Jer. xliv, 14 and 28, xlv, 5 (last clause), it appears that a small number of the remnant of Judah (evidently those who believed the word which came to Jeremiah in Egypt, together with the prophet himself, Baruch, and the King's daughters) escaped from

that land and returned to Judea ; whence, after resuming possession of the ark, etc., abundant opportunities might be found of departing westward in one of the ships of Dan then trading throughout the Mediterranean Sea and beyond it. Isaiah had already addressed exiled Israel as dwelling in the "isles," and whatever that term may *include*, it cannot *exclude* the famous isles of the Western Ocean, whose connection with the East dates from remote antiquity, and whose existence must have been well known in Palestine in Jeremiah's days.

Small though the table figured on Titus's Arch appears when compared with the figures of the bearers, it must have been of enormous intrinsic value. Josephus says, in his description of the triumph, that it was of the weight of many talents. If "many" indicated only five, that would signify a value for its gold (which constituted the bulk of its weight) of not less than about £25,000. The candlestick, in Bartoli's illustration, is made to appear of greatly superior size to the table, and certainly not of less weight, and, being all of gold, would be of at least equal value. Yet the original candlestick of the tabernacle, with all its vessels, is said to have been made out of *one* talent of pure gold (Exod. xxxvii, 24). Were the candlesticks of the Temple, then, so much superior in size to that of the tabernacle ? Canon Knight thought that the base given to the candlestick on the arch was Roman, and no part of the original ; this vessel must, however, have had a base of such dimensions and weight as that shown to enable it to stand securely. The great intrinsic value of these relics (the table and candlestick) would be very apt to prejudice their safety, should they come to light in the present rather unsettled state of affairs in Jerusalem ; and that, even if it were known that the British Government (say) had guaranteed a much larger sum for them in an uninjured condition than could be obtained for their precious materials. They would, of course, in the first place, be claimed by the Porte. The weight ascribed by Josephus to the table seems to be attested by the fact that it and the candlestick each required to be borne on the shoulders of *eight* powerful men.

P.S.—Nelson's "Bible Treasury," just published, contains photographs of the trophies on the Arch of Titus ; from these more truthful representations, and taking the height of the erect human figures at 70 inches, the height of the table, with base, appears to be 23·58 ; without base, 19·38 ; and of the candlestick, 40·38 inches.—J. S.

EDINBURGH, *December 8th*, 1896.

PALESTINE PILGRIM'S CERTIFICATE.

Transcribed by the Rev. C. H. Drinkwater, Vicar of St. George's, Shrewsbury.

The following transcript of an original parchment certificate is probably unique. The British Museum does not possess anything of the kind. The readers of the *Quarterly Statement* will see how the Latin Church in the seventeenth century concentrated the sacred places, for it is not to be supposed that it would have been safe at that time to visit each and every place named therein.

Some few abbreviations are not extended. It has been found impossible for the transcriber to fill out such words as Milon^{le}, Ref .... and Bas .... in the attesting clause (a friend suggests Referendarius Basilicarius for the latter, but this explanation does not commend itself to either his or any other intelligence), while *Canturio*, in the second line, is a place-name which has so far defied investigation. Some other better-informed persons may succeed in the solution of these difficulties. The main body of the document is quite plain. The original parchment will eventually be placed in the Shrewsbury Museum, to which it has been presented.

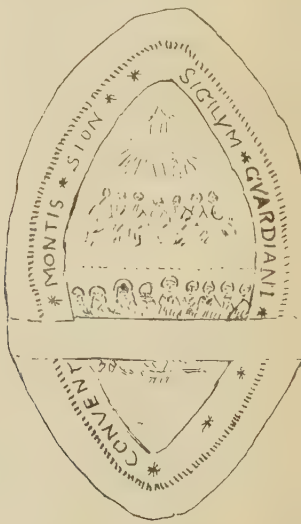
November 17th, 1896.

FR*ATER* PETRVS ANTONIVS GRASSVS
a Canturio Seraphici Min*ister* Ord*inis* S*ancti* Patris N*ostr*i Francisci Præd*icator* Sacræ
Theologiæ lector Iubilatus, Prou*inciæ* Mediolanen*sis*. de Obs*eruancia*. Pr*esbyter*, (or Pro*curator*) Ministri Gen*eral*is
Ex Secret*arius*. totius T*erræ* S*anctæ* Custos, in partibus Orien*tis* Commissarius Apo*stol*icus,
& pro Sacra Con*gregation*e de propaganda fide Responsalis, Missionum Ægyp-
ti. & Cypri Præfectus; Sacriq*ue* Montis Sion, ac S*anctissi*mi D*omi*ni Resur*rection*is.
Sepulchri Guard*ianus* et seruus. Vniuersis et singulis præsentes nostras inspec-
turis lecturis pariter & audituris. Salutem in D*omi*no sempiternam.

NOtum facimus & attestamur D*omi*num Ioannem Iuatt Anglum Londinensem ad hanc Sanctam
Ierosolymorum Vrbem peruenisse, nec non T*erræ* S*anctæ* loca, nempe Gloriosissimum Resurrectionis D*omi*ni N*ostr*i
Iesu x'*pi* Sepulchrum: Sacratissimos Montes, Caluariæ scilicet ubi Saluator noster propriâ morte
nos redemit in Cruce: Oliueti, unde in Cælum mirabiliter conscendit ad Patrem: Sion augustissimi

Eucharistiæ Sacrament*i* institutione, Spiritûs *Sanc*ti missione, compluriumque nostræ salutis mysteriorum celebratione
insignem : Thabor naturâ, & Gloriosâ Transfiguratione Patrum testimonio uenustatum, et Beatitu-
dinum, admirabili earumdem *Domi*ni sermone decoratum. Præterea Sanctissimum Natiuitatis *Domi*ni *Nostr*i
Iesu x'*pi* Præsepe in Bethlehem Iudæ Ciuitate Dauid, Sacram item Nazareth Domum, Angelicâ Annun-
tiatione Deiparæ, et Æterni Verbi Incarnatione celeberrimam : Vallemque Iosaphat pluribus *Domi*nicæ Pas-
sionis mysterijs, ac Venerabili Assumptionis Dei Genitricis Mariæ Monumento exornatam : Bethaniam
quoque hospitio *Domi*ni, et Lazari Suscitatione honestatam ; & Montana Iudææ Sanc'issimæ Genitricis Visi-
tatione ac Præcursoris Natiuitate, eiusque Deserto nobilitata : Thiberiadis Mare quorundam Apostolorum
uocatione Petrique in Ecclesiæ Caput Electione clarum : Canam Galilææ mirabilium x'*pi* primitijs, ac
Sacratiorum insignitam approbatione Nuptiarum. Ac demum cætera omnia sancta piaque loca, quæ tam
in Iudæa, quam in Galilæa et Samaria a Fratribus nostris fidelibusque Peregrinis uisitari solent uisitasse.
In quorum fidem præsentes has manu nostra subscriptas, ac Maiori nostri officij Sigillo munitas expediri mandauimus.
Datis ex Conuentu nostro Sancti Saluatoris Ciuitatis Sanctæ Ierusalem, hac die 14 Mensis Iunij Anno *Domi*ni 1684.

frater Petrus Anton*ius* Grassus
Sacræ Montis Sion Guard*ianus*.



De mand*ato* Suæ Reu*erendissi*mæ *Paternitat*is
fr*ater* Paulus a Milon^le^ Prou*inci*æ Ref .... Bas ....
Secret*a*rius Gener*a*lis Patentium *Terr*æ Sanctæ, &c.
(in dorso) Dom. Iouariũ.

NOTES ON THE "QUARTERLY STATEMENT."

I.—By Lieut.-Colonel Conder, LL.D., R.E.

P. 276. The interesting tomb found west of the so-called Tombs of the Kings, is said to be the only shaft tomb in South Palestine. It differs, however, from a number of tombs in the *Kurm esh Sheikh*, north of Jerusalem, only in having perhaps a deeper shaft. From examples at *Ikâl* and elsewhere this form of tomb has been shown to be Christian, and perhaps as late as the twelfth century in some cases. It seems doubtful if the central part at the bottom of the shaft was used as a loculus. The fourth loculus above may represent a later interment.

P. 277. The existence of rock under the paving of the Upper Calvary Chapel was ascertained in 1882.

P. 336. The criticism of Mahler's dates does not originate with me. More than one antiquarian writer has recently called them in question, and the matter will no doubt be fully discussed by Egyptologists. If it be the case that the cycle supposed takes no note of the proper motion of Sirius, it is evident that they require the correction made in the "Proceedings of the Biblical Archæological Society" (March, 1896, p. 99). I certainly understand, however, that Dr. Brugsch claimed ("History of Egypt," i, p. 248) to fix the period of Thothmes III, not by generations of 33 years, but by astronomical calculation of the rising of Sothis. He concludes that this reign began about 1600 B.C., Mahler's corrected date being 1456 B.C. This is a question for Egyptian specialists —always supposing that it is safe to assume that the Egyptian calendar never underwent any revision between the age of the Ptolemies and that of the 18th Dynasty. Even if Burnaburias died as late as 1410 B.C., he could not have written to Amenophis IV in 1383 B.C., and this latter date should, I think (on the assumed data), clearly be corrected to 1360 B.C.—a gap of half a century, at least. Nor are these the only difficulties. Thothmes III is supposed (*Quarterly Statement*, July, 1896, p. 248) to have reigned only 32 years, yet Dr. Brugsch ("History of Egypt," i, p. 340) speaks of an expedition in the 39th year, and Amenophis III to have reigned 31 years, yet there appears to have been a monument of the 36th year.

I shall be glad to be corrected by Dr. Petrie if I am wrong, but the objections to Mahler's dates by specialists render a further examination of the question necessary.

The passage cited by Dr. Petrie (1 Chr. vii, 21) may refer to an unsuccessful raid on Philistia from Egypt, but it will not be doubted that all Jacob's family descended into Egypt (Ex. i, 1), and that Israel, as a nation, left Goshen with Moses (Ex. xii, 40), according to the Bible.

Dr. Winckler, who copied the Tell Amarna tablets in the Berlin Museum, has now stated his belief that the 'Abiri are the Hebrews, and that the new text of Mineptah favours an earlier date for the Exodus.

P. 341. There are two printer's errors in this page. Maireth should read Mariette, and Hebonites Hebronites. Jacob-el has been read *Yakbor* by Mariette, and represents, I believe, the ruin of *'Akbûr*.

II.—By M. Clermont-Ganneau.

P. 341. The pretended Sun God Aumo :—The only documents relied upon for inventing this pretended divinity are the Greek Inscriptions, collected by Waddington, which I have quoted at p. 260, and the erroneous interpretation of these is admitted to be wrong by Colonel Conder ; so far as I know, no trace of this divinity has been found in the "Ancient Arabic Inscriptions."

P. 341. Kahwâneh :—The identification of this locality (called also Ukhwâneh), which played an important part in the wars between the Crusaders and the Arabs, with the Kahwâneh of our day (at the outlet of the Lake of Tiberias), has already been established by me in my "Études d'Archéologie Orientale," vol. ii, p. 123, and communicated publicly at the *seance* of September 25th of the Académie des Inscriptions et Belles Lettres. I have, moreover, fully demonstrated that the enigmatic "Cavan" of the Western chronicles, corresponding to the Arabic chronicles, was no other than the transcription, very exact, of the Arabic name of the same place. As to Kuseir and Sennabra, I have already indicated their true position—the first, in 1888, in my "Recueil d'Archéologie Orientale," vol. i, pp. 344-348, *cf.* 401 ; the second, in 1875, in my memoir, entitled "Où était Hippos de la Décapole ?"

P. 225. Greek inscription from Damascus :—In the first line one recognises easily enough the name Μητροφανης, followed by a patronymic terminating in . . . που. The name Metrophanes, which should be added to Dr. Murray's decipherment, is very interesting, for it appears already in another Greek inscription from Damascus (Waddington, No. 2549), as that of a High Priest (of Zeus, probably). Then comes the word ὁ πρῶτος, "the first," followed by a title, or the name of an office, terminating in ων (ἄρχων would be a little too short for the size of the space), and of the word ΜΕΛ, a reading which may be corrected to ΜΕΤΑ, "with." This proposal would readily explain the genitive of the following names, the reading of which presents no difficulty.

THE
PALESTINE EXPLORATION FUND.

NOTES AND NEWS.

The Committee again draw attention to the financial position of the Fund. The importance of the excavations now in progress, to all who take an intelligent interest in ancient Jerusalem, cannot be exaggerated. The success that has hitherto attended the labours of Dr. Bliss and Mr. Dickie is incontestable. The work in the Tyropœon Valley, which had necessarily been suspended during the heavy rains, has now been resumed.

The great need of the Fund is *new annual subscribers*, and if everyone interested in the exploration of the Holy Land could succeed in inducing one friend to become a subscriber, the financial difficulties of the Fund would be at an end.

Dr. Conrad Schick notes in a recent report that the German-speaking Jews in Jerusalem have formed a Literary Society, and founded a library, which already contains 12,000 volumes contributed by their co-religionists in Europe and America. This has been done in a kind of rivalry of the Talmud Schools, where only Rabbinical literature is studied.

Dr. Schick also reports that the Latins have introduced a new organ into their part of the Church of the Holy Sepulchre, which has excited the jealousy of other Churches, who have lodged a complaint with the Pasha about it, and the matter has been referred to Constantinople.

It is reported that there is a proposal to extend the railway from the present railway station at Jerusalem across the Wady Rababeh (so-called Valley of Hinnom) by an iron bridge, round the southern slope of the traditional Zion, and on to the "Dung Gate," where a second station will be established, and whence the line is to be carried northwards past the south-eastern corner of the Haram es Sherif, and subsequently southward above the Village of Silwan, and then eastward to the Dead Sea. From the Dung Gate a carriage road is to be made leading up the Tyropœon Valley to Damascus Gate and further north. Dr. Schick remarks:—"People here think this plan too fantastic, and I myself thought so at first. But the thing is possible, and I have seen many things done in this country which I once thought would never be done. What is needed is money!"

Professor R. Phenè Spiers, F.S.A., is preparing a paper on the Great Mosque of the Omeiyades at Damascus. Mr. Dickie has been recently there to examine certain points which it was desirable to clear up, and the results of his investigations will be embodied in the Professor's paper, which it is hoped will be published in the *Quarterly Statement* for July.

The Rev. T. E. Dowling has resigned the post of Hon. Local Secretary to the Fund in Jerusalem on his being appointed Chaplain of the Memorial Church, Pera, Constantinople.

The income of the Society, from December 22nd, 1896, to March 20th, 1897, was—from annual subscriptions and donations, including Local Societies, £857 13*s.* 9*d.*; from all sources—£1,110 0*s.* 1*d.* The expenditure during the same period was £843 5*s.* 2*d.* On March 20th the balance in the Bank was £559 19*s.* 2*d.*

Dr. Post's "Flora of Syria, Palestine, and Sinai," is now ready, and may be obtained on application to the author at Beirût. (*See* p. 151.)

The work embraces 126 orders, 850 genera, and 3,416 species, many of the latter, as well as numerous varieties, being new to science. It is illustrated by 445 woodcuts, and a coloured map, showing the botanical regions of the district covered. It contains a general analytical key to all the orders, and special keys to the larger tribes and genera. Much labour has been expended on these keys, and it is hoped that, by their means, the usefulness of the book will be greatly increased, especially for students and travellers.

The following gentlemen have kindly consented to act as Honorary Local Secretaries:—

Rev. J. F. McLaughlin, Victoria University, Queen's Park, Toronto.
Rev. H. J. Barton Lee, Headborough, Ashburton.
D. S. Chisholm, Esq., Inverness, N.B.

Memo. for Subscribers to the Survey of Palestine.—In the original programme it was intended that the "Archæological Researches" of M. Clermont-Ganneau should be published in one volume, but the work increased so much since its commencement that the Committee found it necessary to arrange for the publication of the whole in two volumes. Vol. II has been published in advance for the reasons stated in the prefatory note.

Vol. I, which treats of Jerusalem and its neighbourhood, is now well forward, and, when ready, will be sent out to the first 250 Subscribers without any increase in their subscriptions for the full set.

The set consists of "The Survey of Eastern Palestine," by Lieut.-Colonel Conder, LL.D., R.E., in one vol.; "The Fauna and Flora of Sinai, Petra, and the Wâdy 'Arabah, by H. Chichester Hart, B.A., in one vol.; "The Archæological Researches," by Professor Clermont-Ganneau, in two vols. Four volumes in all.

There are only a few copies of the sets left at the price of £7 7*s.*

An important work by Lieut.-Colonel Conder, R.E., entitled, "The Latin Kingdom of Jerusalem"—1099 to 1292 A.D.—and describing the condition of Palestine under the Crusaders, was published in January. It is based on the chronicles and contemporary accounts, both Christian and Moslem, and on the information collected during the progress of the Survey, with descriptions of the scenes of the important events, and other information not to be found in previous histories of the Crusades. The whole forms an octavo volume of over 400 pages, with two maps, giving the Crusading names and boundaries of the "Fiefs" throughout Palestine.

The Committee have to announce that in accordance with a circular letter published in "Notes and News," January *Quarterly Statement*, 1896, the following translations have been issued to subscribers to the Palestine Pilgrims' Text Society:—

"Marino Sanuto's Secrets,"
"Burchard of Mount Sion,"
"Jacques de Vitry,"

and that a translation from the original Arabic has been made of Bohâ ed Din's "Life of Saladin," A.D. 1145-1232, which forms the concluding work of the Text Series.

This translation has been revised and annotated by Major-General Sir Charles Wilson, K.C.B., and Lieut.-Colonel Conder, LL.D.

The work is in the press, and will be ready, it is hoped, shortly.

A complete set of the translations in 12 volumes, with general index, bound in cloth, price £10 10*s*. A catalogue describing the contents of each volume can be had on application to the Secretary, 24, Hanover Square.

Branch Associations of the Bible Society, all Sunday Schools within the Sunday School Institute, the Sunday School Union, and the Wesleyan Sunday School Institute, will please observe that by a special Resolution of the Committee they will henceforth be treated as subscribers and be allowed to purchase the books and maps (by application only to the Secretary) at reduced price.

The Committee have to acknowledge with thanks the following donations to the Library of the Fund:—

"The Historical Geography of the Holy Land." 4th edition. By George Adam Smith, D.D. From the publishers, Hodder and Stoughton.

We have received from M. Clermont-Ganneau No. 17-23 of his "Études d'archéologie Orientale," which contains the following, among other articles:—

14. Sur quelques localités arabes de l'époque des croisades. 15. Thisbé la ville d'Elie et le mont Aûf. 16. Nouvelles inscriptions grecques et romaines de Syrie. 17. Une inscription des croisades de Saint Jean d'Acre. 18. Edouard I^er^ d'Angleterre et la mission mongole de 1287, en Gascogne. 19. Inscription phénicienne gravée sous un pied de Vase en terre cuite. 20. Le mois phenicien de Zebah Chichchim. 21. L'inscription phénicienne de Narnaka. 22. Les stèles araméennes de Neîrab.

The Committee will be glad to receive donations of Books to the Library of the Fund, which already contains many works of great value relating to Palestine and other Bible Lands. A catalogue of Books in the Library will be found in the July *Quarterly Statement*, 1893.

Mr. George Armstrong's Raised Map of Palestine is on view at the office of the Fund. A circular giving full particulars about it will be sent on application to the Secretary.

The third edition of the new Collotype Print or Photo-relief from a specially prepared copy of the Raised Map of Palestine is now ready. Price to subscribers, 2*s.* 3*d.*; non-subscribers, 3*s.* 3*d.*, post free.

The print is on thin paper, measuring 20 inches by 28½ inches.

The museum of the Fund, at 24, Hanover Square, is now open to subscribers between the hours of 10 a.m. and 5 p.m., every week-day except Saturdays, when it closes at 2 p.m.

It may be well to mention that plans and photographs alluded to in the reports from Jerusalem and elsewhere cannot all be published, but all are preserved in the offices of the Fund, where they may be seen by subscribers.

While desiring to give publicity to proposed identifications and other theories advanced by officers of the Fund and contributors to the pages of the *Quarterly Statement*, the Committee wish it to be distinctly understood that by publishing them in the *Quarterly Statement* they neither sanction nor adopt them.

In order to make up complete sets of the *Quarterly Statement* the Committee will be very glad to receive any of the back numbers.

Subscribers who do not receive the *Quarterly Statement* regularly are asked to send a note to the Secretary. Great care is taken to forward each number to those who are entitled to receive it, but changes of address and other causes occasionally give rise to omissions.

In the *Quarterly Statement* for January, Dr. Bliss's Eleventh Report was accidentally printed from an unrevised proof, and contains the following *Errata*:—

Page 19, line 7 from top, *for* "these" *read* "then."
„ 23, „ 1 „ *for* "relic" *read* "ubi."
„ 23, „ 6 „ *for* "larantur" *read* "lavantur."
„ 23, „ 6 „ *for* "apus" *read* "aquis."
„ 23, „ 7 „ *for* "astendentur" *read* "ostendentur."
„ 23, „ 7 „ *for* "leprasi" *read* "leprosi."
„ 23, „ 8 „ *for* "piscuia" *read* "piscina."
„ 23, „ 10 „ *for* "relic" *read* "ubi."

STATEMENT OF RECEIPTS AND EXPENDITURE FOR THE YEAR ENDING 31st DECEMBER, 1896.

Receipts.

	£	s.	d.
To Balance in Bank 31st December, 1895—			
Net Balance £306 14 2			
Subscriptions paid in 1895 in advance for 1896 .. .. 14 3 0			
	320	17	2
Donations and Subscriptions	2,279	16	10
From Lectures	5	11	3
From Sales of Books	763	17	0
From Sales of Maps, Photographs, Slides, Casts, &c.	248	15	3
	£3,618	17	6

Expenditure.

	£	s.	d.
By Exploration..	1,333	15	0
Printing and Binding, including the *Quarterly Statement*	566	6	0
Maps, Lithographs, Illustrations, Photographs, Slides, Casts, &c.	289	3	10
Advertising, Insurance, Stationery, and Sundries	85	8	11
Postage, of Books, Maps, Parcels, including the *Quarterly Statement*	150	13	9
Salaries and Wages	402	9	11
Office Rent, Gas, and Coals	230	16	3
Liabilities paid off during the year	200	0	0
Subscriptions paid in 1896 in advance for 1897 .. .. £45 11 2			
Net Balance 314 12 8			
360 3 10			
Balance in Bank 31st December, 1896	360	3	10
	£3,618	17	6

Examined and compared with Vouchers and Cash Book and found correct.

Walter Morrison, *Treasurer.*

TREASURER'S STATEMENT.

The total income of the Fund for the year 1896 was £3,298 0*s.* 4*d.*; of this amount £2,279 16*s.* 10*d.* was from Donations and Subscriptions; £5 11*s.* 3*d.* from proceeds of Lectures; £763 17*s.* 0*d.* from sales of books; and £248 15*s.* 3*d* from sales of maps, photographs, casts, and slides.

The amount spent on Exploration was £1,333 18*s.* 6*d.*

On printing the *Quarterly Statement*, new editions of books, the archæological researches, and binding, £566 6*s.* 0*d.*

On new editions of maps, lithographs, illustrations, photographs, slides, and casts, £289 3*s.* 10*d.*

The advertising, insurance, and stationery cost £85 8*s.* 11*d.*

The postage of the *Quarterly Statement*, books, maps, parcels, circulars, letters, &c., cost £150 13*s.* 9*d.*

The management, including rent of office, amounted to £633 6*s.* 2*d.*

The liabilities were reduced by £200.

From America the following amounts were received through the Hon. General Secretary, Professor Theodore F. Wright: from Subscriptions, £243 13*s.* 1*d.*; from publications, £71 0*s.* 5*d.*

The *Quarterly Statement* is sent post free to all Subscribers of 10*s.* 6*d.* and upwards, and all Subscribers are entitled to purchase the publications at the reduced prices as stated in the list.

In taking over the works of the "Palestine Pilgrims' Text Society," as arranged for according to the circular letter published in the *Quarterly Statement*, January, 1896 (Notes and News), £108 5*s.* has been received for new sets and odd numbers to complete sets. Against this, £181 6*s.* 7*d.* has been expended for translating, printing, and binding. The sets in stock will cover this and any additional expenditure that may be necessary under this head.

Assets.	£	*s.*	*d.*	Liabilities.	£	*s.*	*d.*
Balance in Bank, December 31st, 1896.. ..	360	3	10	Printing, Lithography, Current Expenses, &c.	787	18	6
Stock of Publications in hand, Surveying Instruments, Show Cases, Furniture, &c.							
In addition there is the valuable library and the unique collection of antiques, models, &c.							

Walter Morrison, *Treasurer.*

Tourists are cordially invited to visit the Loan Collection of "Antiques" in the Jerusalem Association Room of the Palestine Exploration Fund, opposite the Tower of David. Hours: 8 to 12, and 2 to 6. Maps of Palestine and Palestine Exploration Fund publications are kept for sale.

Application for Lectures should be addressed to the Secretary, 24, Hanover Square, W.

PLAN TO ILLUSTRATE DR BLISS'S TWELFTH REPORT

PALESTINE EXPLORATION FUND

Vincent Brooks, Day & Son lith

TWELFTH REPORT ON THE EXCAVATIONS AT JERUSALEM.

By F. J. Bliss, Ph.D.

The last two reports, while describing important remains found and followed during our search for the city wall, threw little light on the position of the wall itself. The present report, however, concerns itself chiefly with that matter, and adds considerably to our knowledge of it. The whole question will not be clear till we have fitted together the different pieces of the puzzle, but the bit last discovered promises to be one of the most important of the lot.

In the last *Quarterly* I mentioned that we had found the angle of the wall crossing the Tyropœon below the Old Pool, but no particulars were given, as the excavation was at that time incomplete. The wall at this corner may now be described. In order to connect it with what has gone before, a brief recapitulation will be in place. From the Protestant cemetery to a point outside the Old Pool at Siloam a city wall had been traced, passing during its course under the Jewish cemetery. For a distance of 100 yards (in a field south of Bâb Neby Daûd) the line was found to be double: that is, the lower wall was buried by *débris* upon which the later wall was built, on a slightly different line. The lower line was chiefly characterised by bossed masonry; the upper line by smooth. I affirmed (perhaps with an ardour more archæological than scientific) that the line running down to Siloam was "certainly" the older, furnishing, as I supposed, an adequate explanation which, however, I seem not to have made entirely clear. For on p. 169 of the *Quarterly* for April, 1896, Colonel Conder says: "While agreeing with Dr. Bliss that the wall now found (*i.e.*, the lower wall where the line is double) is probably Jewish, I am not aware of any facts adduced by him (p. 14) to show that it 'certainly ran down to Siloam.' The masonry there found by Dr. Güthe was very clearly Byzantine, and would have belonged to the wall of Eudoxia."

The facts were adduced on p. 11 of the January *Quarterly* for 1895. For some distance west of the Jewish cemetery the wall was destroyed, but the wall found entering the cemetery, emerging from the cemetery at the second gate, and crossing the valley, was characterised by bossed masonry, the peculiar smooth work of the upper line being entirely absent. Accordingly—while withdrawing the word "certainly"—I still assume, as the most probable explanation, that it was the lower line (seen before to have been characterised by bossed masonry) that ran on to Siloam. For the absence of the smooth masonry near the cemetery and on to Siloam I have given two possible explanations: either the old wall was in such good preservation that it needed only to be repaired

the smooth stones of the reparation having since disappeared, or else the later line had diverged from the earlier at some point west of the cemetery. Colonel Conder's reference to the Byzantine masonry discovered by Dr. Güthe at Siloam is not to the point, as it does not happen to exist on the line of wall we are describing, but occurs on a wall branching off from this line before it crosses the Tyropœon valley.

I must now refer the reader to the plan accompanying the Sixth Report, published in October, 1895, on which is shown the wall from the second gate to the point where it was traced crossing the mouth of the Tyropœon below the Old Pool. From the point B on, the wall shows signs of two distinct periods. The earliest is the line BK, from which at E, F, and I there advance buttresses, resting on a base-wall projecting in a line with their faces. The later period is represented by the line BJ, and was explained as follows: —"The first wall fell into ruins beyond the point B, but the buttresses and the base-wall remained. When the wall came to be repaired advantage was taken of these solid remains, the base-wall between the buttresses was carried up to the top, completing an unbroken face of wall, and this new line, at I, 12 feet outside the old line, was carried back to B, with a gradually diminishing distance between the two lines, till they met at B" (p. 311). A third period was indicated by a rough retaining wall of pocked stones (not figured on the plan, but shown in the sections), which was rendered necessary by the dangerous forward bulging of the wall owing to pressure of water from the Pool. On the present plan, the point of divergence B is represented by the letter A, and the first two periods are distinguished from each other by a difference in hatching.

Work on this wall was temporarily abandoned in August, 1895, as we were obliged to concentrate our forces on the excavations at the top of the hill. But in early winter we opened a shaft at H, finding the wall at a depth of 36 feet. Though we came upon masonry, no clear connection was established with the former line, and finally the rains compelled us to close up the shaft. Fortunately the land belongs to our friends the Khaldi, and we were not obliged to fill it up, but only to board it over at the mouth. In the autumn of 1896 we recommenced work there, and the line GI was clearly established. A glance at elevation HI will show that in the shaft nine courses of stones were observed. For seven courses from the rock the wall consists of rough rubble set without lime, and having a distinct batter. These run on beyond H. The eighth and ninth courses are of well-dressed, well-set stones, also without lime. The top course, being here ruined, does not run on to H. But the eighth course does thus run on, forming a return angle at H, the corner stone being bossed on two sides. In line with this fine eighth course, a rubble course runs on beyond H, resting on the battered seven courses below. (For the sake of avoiding confusion this is not represented on the elevation.)

Here, then, we find the same state of things as occurred in this same wall traced to the south-west in 1895. The double-bossed stone at H

represents the return angle of a buttress, similar to the buttresses at B, C, and D. The seven lower courses are part of the base-wall found before to project in a line with the buttress-faces. The rough work beyond the double-bossed stone represents the reparation, when the spaces between the buttresses were filled in by carrying up the base-wall to the top, thus completing an unbroken line across the valley. At H we tunnelled at right angles with the line of wall to ascertain its thickness. As the rock rises rapidly the work here was somewhat difficult. The total breadth was found to be 19 feet. As in the cases of the other buttresses, the internal angles were not clear (which is not strange, in view of the fact that the original wall was damaged and repaired), but, assuming the original wall to have had the usual thickness of 8 feet, there remain 11 feet for the projection of this buttress. This is about the same projection as the remains of the other buttresses indicated. When the pressure of the water in the Old Pool demanded a strengthening of the wall, by the filling in of the spaces between the buttresses, the total thickness of the dam came to be 19 feet.

The identity of the wall described at this corner with that excavated in 1895 is further proved by a detailed examination. In both cases the base-wall has a batter. The masonry of the buttresses is also the same: a mixture of drafted and plain-faced stones. The bosses project from 1½ to 6 inches, the margins are worked by chisel-draft, but in a very few cases on the stones of the last discovered buttress the comb-pick has been used. In both cases the absence of lime was noted. In describing the buttresses discovered in 1895 I remarked that it was impossible to tell the character of the setting, as the joints were wrenched apart by pressure, causing the whole face to bulge forward.[1] The corner buttress HI preserves a perpendicular face, and a fine jointing is observed in the setting of the stones. As the wall here does not bulge forward there was no need of carrying the rough outer retaining wall to this point; at any rate, no such wall was found here. However, in front of HI there was masonry so ruined that we could make nothing of it, but as it was not bonded into the main wall it is clearly some later addition. As the wall at HI is proved to be identical with the wall discovered before, we have dotted in the part not excavated, assuming the buttresses E, F, and G.

The corner buttress HI is interesting. A few feet to the right of the shaft (*see* elevation HI) the last two stones of the top course drop, and appear to be set on end, being shifted from their original position. Beyond these only roughly-squared, quarry-picked stones carry on the line to the corner I, where bossed stones would be expected, if anywhere. Turning the corner, we tunnelled along the line IJ at an obtuse angle with IH (*see* key plan) to the point J, where a projection of 18 inches occurs. To the left of the projection (*see* elevation IM) the two top courses are of well-squared picked stones. Work had here become

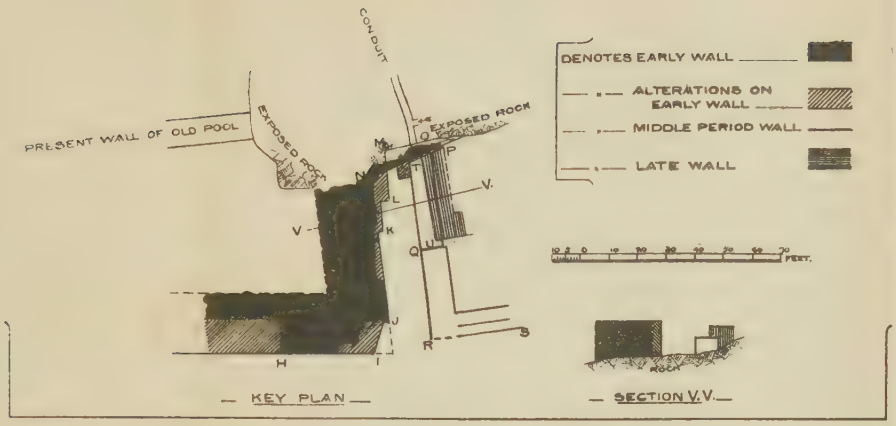
[1] *See* "Specimen at F," *Quarterly* for 1895, p. 310.

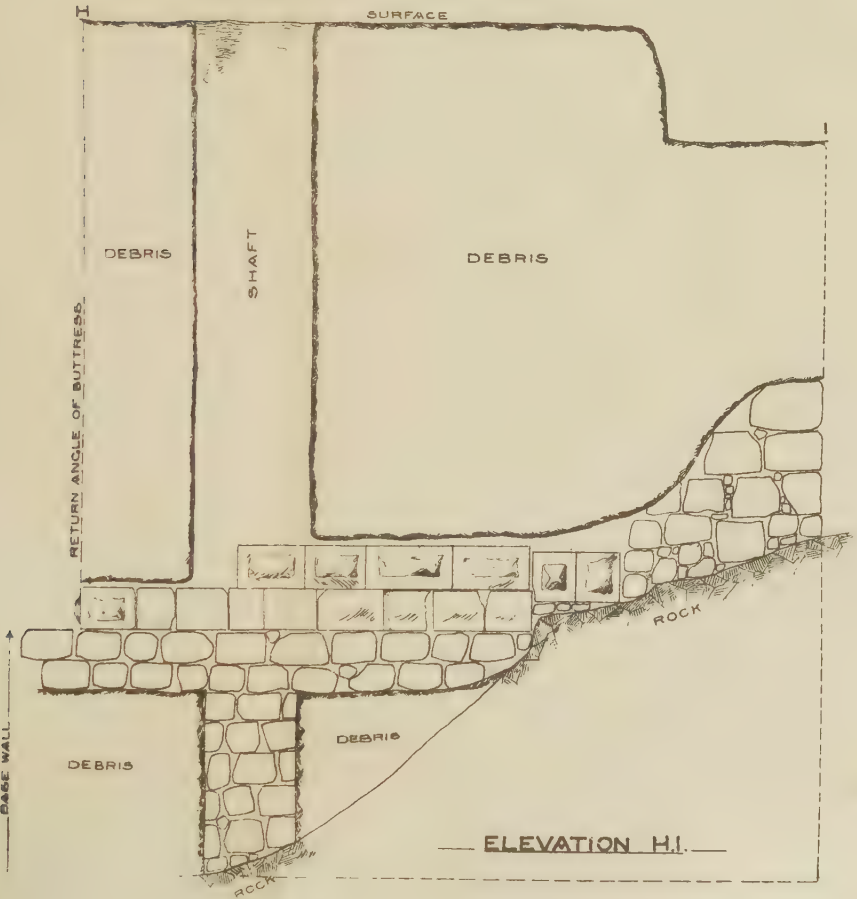
exceedingly slow, owing to a mass of consolidated stuff glued against the wall, a sort of natural cement more difficult to break up than the solid rock. Accordingly we decided to approach the wall at a point higher up. In the new shaft were observed four courses of bossed stones, similar in height and dressing to the bossed stones at H. At J these were seen to project 18 inches from the continuing line of wall, immediately above the similar projection in the rough masonry, as seen in the tunnel below, but the bossed courses are broken off irregularly, not forming a corner, clear sign of a reparation. The similarity of the bossed work at H and J show that these represent the original work. In other words, the north-east corner of the original buttress had been ruined and repaired, the reparation having altered the shape of the corner, which probably first followed the dotted lines formed by a projection of HI and KJ. The stones of the reparation in the upper tunnel are smaller than the original bossed-stones, and are plain-faced, picked, and well squared, similar to the two top courses below.

The bossed work continues to the right of the shaft for a few feet, when it ceases, the wall running on in the same line but in rough rubble to K, where another projection occurs, this time of 22 inches. Built upon this projecting line of rubble we find a class of masonry quite different from anything seen before in this excavation. Five courses were seen in a shaft opened here. The stones are small, varying in height from $9\frac{1}{2}$ to $11\frac{1}{4}$ inches. They are set in lime, with fairly uniform joints. As to dressing, they are plain-faced and comb-picked, a few having chisel-picked centres but no projections—a favourite method of dressing in modern Jerusalem architecture. The courses have back-sets, varying from $1\frac{1}{4}$ to $2\frac{1}{2}$ inches. Owing to the rude nature of the rubble foundation and to this back-setting, the upper masonry falls generally into line with JK, thus counterbalancing the lower projection. At L there occurs another projection of 2 feet in the rubble, which runs on to M in an even ruder condition than observed before. It is here set in cement. At M the line LM butts up against the wall NP, which runs back of it for about 2 feet towards N, where NP is ruined. At NP we seem to have returned to the original line, the angle having been where a projection of JK would meet NP. In height the courses are identical with the original work at J and H, but they are less evenly set. In the top bed of the upper course lime was observed on a single stone, but no signs of lime were found below. The stones are mainly plain-faced (as are some along the line HI) and rough-picked, two having slightly projecting centres. As the few courses remaining at NP are built up against the rock it would have been impossible to recover its thickness had it not been for the conduit, 9 feet high, which breaks through the rock at right angles. NP is here built solidly back into this conduit, showing an inner face ; hence the thickness could be measured and was found to be 8 feet.

Near P the wall butts up against the rock, but in the same line, just beyond, the top of the exposed natural rock is cut out in the form of beds for stones, which show how the face of the wall ran on. Five

EXCA





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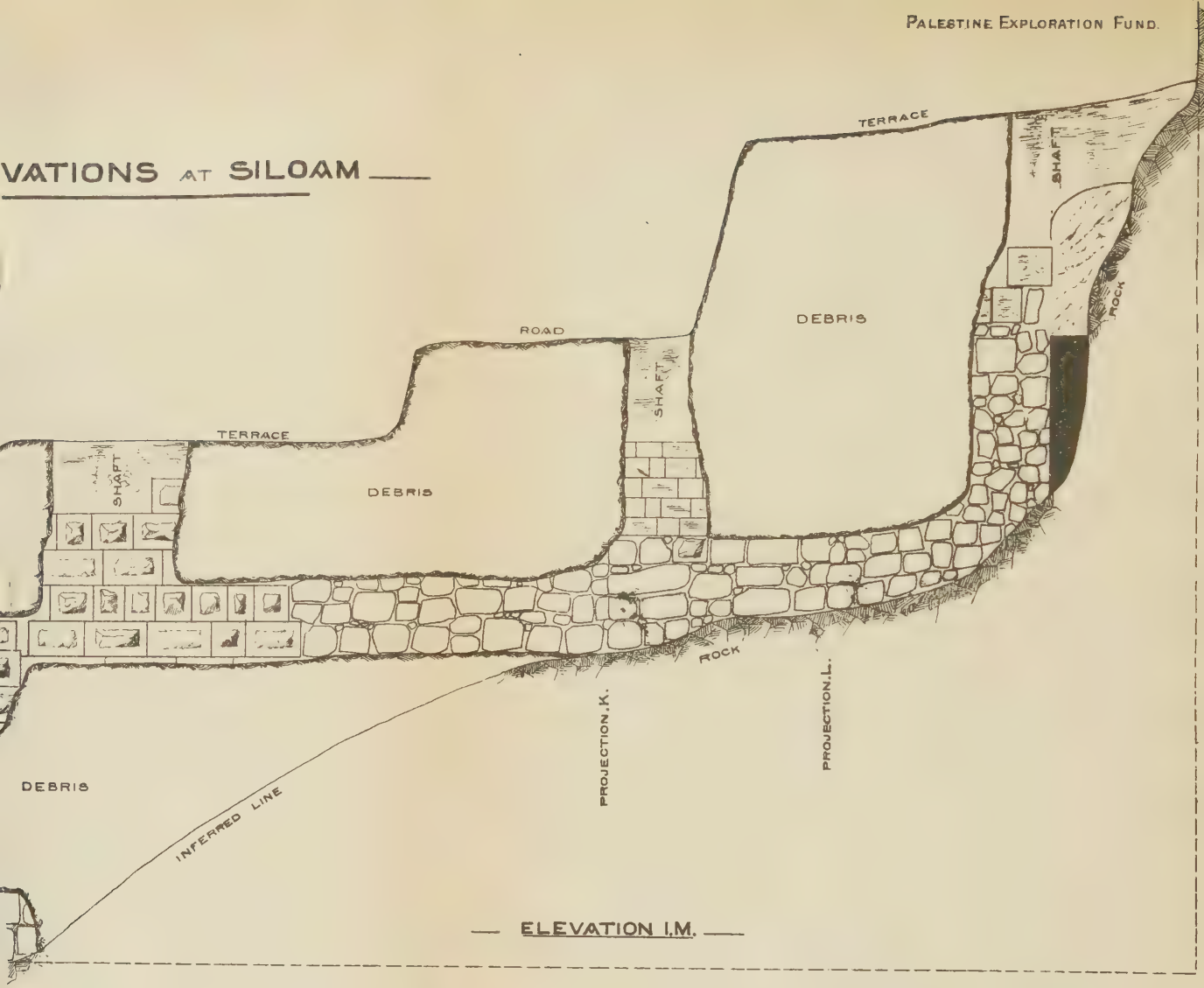
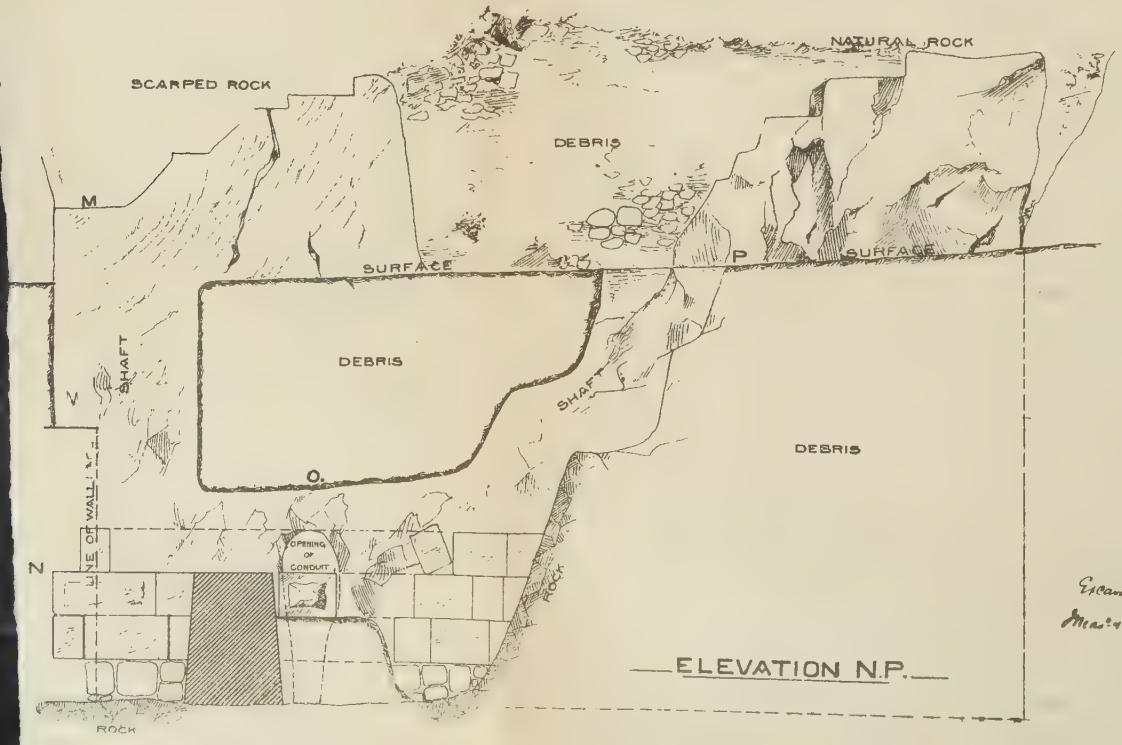


ELEVATION I.M.



ELEVATION N.P.

Excavated by F. J. Bliss.
Mainly Drawn by Arch. C. Dickie

such beds may be seen on elevation NP. This is a most important point, as it proves that the wall was carried fairly up the eastern hill. The presumption is strong that it ran on to meet Warren's Ophel Wall.

Similar beds occur along the top of the *scarped* rock, so far back from the face of the wall at N to permit of our supposing that they served for the stones of the inner face of the wall. Another supposition will be mentioned later. At T the stones of the wall NP are cut diagonally to let in a small buttress, the purpose of which is mysterious.

We have now to consider the wall TR (*see* key plan). This advances at about right angles from the wall NP, which, however, runs *back* of TR, sure proof that the latter is an addition. The face of TR consists of masonry similar to that found at K, but the height of the courses is greater, averaging 13 inches instead of 10½. The stones are well set in lime, having picked centres and comb-picked margins, but no projections. Towards T the dressing becomes finer, and a fine, comb-pick dressing mingles with the picked-work in the centres. About half-way between T and R a straight joint runs through the thickness, not occurring, however, in the facing stones. To the left of this joint the thickness is 8 feet; beyond the joint it is 9 feet. At the point R this wall no longer rests on the rock but on the consolidated stuff mentioned before. At R the wall stops, but we have no clear corner. Trenching in a line further on failed to reveal any continuation of TR. However, the rude wall RS was followed for some 35 feet at right angles. Breaking through its face at two places we found its thickness to be only 3 feet, but it was built up against a face of a *second* wall, which turned out to be 5 feet thick. This second face is of masonry, in general similar to that at TR, but not so finely dressed or well-set. Beyond S much work was done, which was tedious and expensive, owing to complicated land-ownership, and to the fact that we were obliged to destroy numerous small plats of lettuce at one shilling and ninepence the plat. Hence it was a disappointment to find no further traces of RS, though the point where it stopped was not ascertained within a few feet, owing to a quarrel between two landowners as to their boundary.

Our theory as to the line TRS is as follows:—The thickness of the wall TR makes it probable that it was part of the city wall, and its position indicates that it may have formed the side of a tower; the absence of a good corner suggests that this tower may have projected further; the *inner wall* along the line RS (5 feet thick) may have been a partition wall within the tower; when the original outer face was ruined the projection of the tower was decreased and the inner partition was strengthened by the added face, 3 feet thick, thus forming a new outer face, 8 feet thick, for the curtailed tower. The straight joint within the thickness of TR suggests some other sub-period. The probable limits of this tower are indicated by dotted lines on the general plan.

The question now arises: to what relative period are we to assign this tower? It is certainly later than NP, which runs back of it. It is hence

later than HIM, of which NP is a continuation. But it seems also probable that it represents a tower built after HIM was abandoned, as the long narrow passage between IM and TR is an arrangement difficult to explain, as the rock rising perpendicularly at the end of it shuts out the theory that a gate once existed there. Assuming, then, that this outer dam was abandoned, we may suggest that the inner dam, now existing (marked "Present Wall of Old Pool" on key-plan), was built at a later period, and used for the line of the city wall, which then ran along the stepped-up scarp at M (*see* elevation NP), and perhaps further on made use of the old line at P. TRS may then be considered as a tower projecting from this new line of city wall. I am obliged to mention that this assumption necessitates the corollary that the masonry at the point of reparation K is older than the line TR, which is so similar to it. If, however, they are contemporaneous, the theory may be so far modified as to include K as a sort of buttress in the new system. This would still do away with the very long narrow passage. It is a pity that the much-used road interfered with our determining the limits of the masonry at K, which does not continue to the next shaft.

A last period remains to be described. This is the wall TU, behind which NP also runs. It is built on the ruined remains of the wall TR, and is also 8 feet thick. It consists of large rough rubble. The corner occurs at U, beyond which it was traced for a few feet. Long and unsuccessful search was made for it further on. We assume it to be a small tower projecting from the later line of wall when the tower TRS was destroyed.

The work described in these few pages cost us much thought and money. Owing to the nature of the ground and to the jealousy of small proprietors, the number of shafts sunk relative to the length of tunnels bored was far greater than ever before. As some of the walls examined ran parallel and near to each other, the ground was pretty well honey-combed. The vegetables destroyed were of the more expensive varieties. The matter was much complicated by the various reparations and rebuildings. But it is just these that give the corner its great importance in the history of Jerusalem fortification, and justify the expenditure of time and money. These various reconstructions have been shown on the plans. Our study of these, on the ground, have forced us to admit *five distinct periods*, some of them showing indications of sub-periods, for the wall crossing the Tyropœon below the Old Pool and running up the eastern hill. At the risk of some repetition, we may recapitulate these in order :—

1. The wall with advancing buttresses, built without lime. This wall is in general 8 feet thick, but rests on a base-wall projecting in a line with the buttress faces, which project 11 feet from the upper wall, giving 19 feet as the thickness of the base-wall. A large corner buttress occurs at HI, the line running back north-west to the point N, and then turning up the hill in a north-easterly direction. Between the corner I and the point N this first wall had been much damaged, but the original

masonry is *in situ* at J. This system is represented on the key-plan in solid black.

2. The second period consists of a strengthening of the first by filling up the spaces between the buttresses with masonry carried up from the base-wall, thus giving about 19 feet as the thickness of the dam along its entire length. The ruined corner buttress was repaired, but its angle was altered. The character of the masonry of this first reparation may be seen in the work at the left of "projection J." No lime is used.

3. The masonry at K, so different from any observed elsewhere on the line, demands our recognition of a distinct reparation at this point. Not only are the stones smaller, but the dressing is peculiar, and the stones are set in lime.

The great strengthening of the wall across the valley was not sufficient to stand the pressure of water from the Old Pool, for its bulging forward necessitated the building of a rough retaining wall, seen in the cross-sections at F and I on plate facing p. 309 of the *Quarterly* for 1895. This work may have been contemporaneous with the reparation at K.

4. Thus far our recapitulation has been concerned with reparations on one line of wall. It has been shown before, however, that the tower TRS probably projected from an altered line of wall, *i.e.*, from a continuation of the present wall of Old Pool, when the lower dam had been abandoned. The similarity between the masonry along the line TR and that at K was noticed, and the possibility of K's being a buttress on the new line was admitted. But we would still have four periods up to this point, for, if K does not belong to the earlier dam wall, then the second strengthening of this dam would be earlier than K, thus falling under a distinct period. Indications of sub-periods in the tower TRS have been shown to exist.

5. The line TU has been taken to represent a tower projecting from the supposed second line of wall, built upon the ruins of the tower TRS. This brings up the number of periods to five.

We have presented to the reader the facts from which we have deduced these five periods, and our reasons for deducing them. He may not entirely agree with us in either the number or in the order of the periods deduced. The important point is that these various reconstructions actually exist. Any one glancing at the elevations, without reading a word of my explanation, will admit this. A wall may present one of two kinds of patchwork. It may have been buil at one time out of various kinds of old material, which will then be jumbled together. Or the patchwork may result from reparations, effected at different times, in which case we would find blocks of homogeneous material, set in a distinct manner, extending for some considerable length. Such is the patchwork we are now considering. Whatever may be the exact relation of these various reconstructions they declare one fact: at many periods in the history of Jerusalem

the city wall crossed the Tyropœon below the Old Pool. The continuation of the line up the rock of the eastern hill proves that we are dealing with no mere dam wall. While excavating is still going on the digger should be careful in making historical deductions. However, I will venture my tentative opinion that our buttressed wall (built without lime) is the old Jewish wall, which, when the Siloam Aqueduct was constructed, in all probability included the pool within the city. The various reparations on it may have been the work of later Jewish kings. Leaving the line at the time of Herod an open question, we have to account for the tower TRS, which appears to belong to the line of the present existing dam wall, built after the old dam was abandoned. Eudocia found the pool excluded from the city and she included it; hence these works may have been the reconstruction. One thing is clear: the various periods along this line represent many builders, and Eudocia can hardly have been the first; hence it is reasonable to suppose that some of it must have been ruined and abandoned when she began the work.

Interesting light has been thrown upon the extent of the Old Pool, which reached to the buttress HI. We have shown elsewhere how the roughly-built retaining wall was permeated by a natural cement formed of carbonate of lime, produced by the action of water on the stones, doubtless through leakage or overflow from the pool. This exceedingly hard "stuff" was found also all around the buttress HI; none of it remains at K, but it occurs beyond. It extends as far as R, the later wall TR at that point being built upon it.

Reference has been made to the conduit closed by the wall NP which was built back into it. On the key-plan a branch may be seen to enter it from the right. This branch seems to be the main line of Schick's "Second Aqueduct" from the Virgin's Fountain to the Pool of Siloam (compare plan facing p. 13 of the *Quarterly* for 1891). These conduits are hewn in the solid rock. The branch conduit is at least 7 feet high; its floor being 5 feet 9 inches higher than that of the other, the drop being almost perpendicular. At the point of junction the main conduit is over 13 feet high, but its roof drops 5 feet at the point where the back of the wall NP is let in. The wall NP is clearly later than this part of the conduit. But we cannot tell whether it be later or earlier than the branch aqueduct conduit which, as I have said, represents part of Schick's "Second Aqueduct."

On p. 12 of the last report I spoke of a wall and scarp found to the west of the series of shafts sunk across the Tyropœon, separated from these by a road. Though the wall was built of small, rough stones (set in lime), in courses averaging only 10 inches high, its thickness, ascertained at a point where it is built directly on the scarp to be 8 feet, decided us to follow it. Elsewhere the thickness could not be determined as its foundations are built *against* the scarp (12 inches out), the part once higher than the top of the scarp being ruined. It had been traced north to the road and south to a point where it had been ruined, the

scarp running on with two turnings. Our excavations since, while taking considerable thought and labour, have been negative in their results. A shaft was made to the north, beyond the road. A rough wall, partly in the rock, was found in the line desired, but only 4½ feet thick. Pushing west from its inside face for 9 feet, under the road, we found a wall, running apparently parallel, of similar thickness and material. These two walls evidently belong to a small house. Between these two walls, and outside the first one, were the parallel walls of a cemented Birket, 4½ feet thick, older than the house. We trenched and tunnelled for some 30 feet along the descending rock east from the first wall, in order to catch any turn of the scarp or wall desired, with no results beyond the finding of another rude wall 4 feet thick. Thinking that the Birket may have occurred within the thickness of the desired wall (as sometimes happens, notably in the Crusading Wall discovered in the western hill) we followed the western Birket wall beyond the Birket limits, where its thickness was still found to be only 4 feet. In this tunnel another Birket was crossed.

In the meantime we were following the scarp at the southern end of the line discovered last season. This had been proved to be earlier than the wall built partly on it and partly against it, but it still was thought to represent possibly an earlier line of wall. It was followed this season along various turnings for over 50 feet. It is never more than 10 feet high, and its top is buried under only a few feet of soil. At one place a large chamber has been hewn back into the rock, with apertures, like small cupboards, cut into its sides, similar to other niches found at other points of the scarp, clear indication that we were following a system of rock-hewn dwellings, such as we had found before on this same line, and such as occur at many places on this western hill. The rock, forming the back wall of this chamber, was plastered. A thin wall of masonry enclosed it in front. The many windings of the scarp, occurring close together, while quite explicable on the theory of dwellings, would have no place on a scarp hewn for the base of a wall, hence this excavation was abandoned.

Owing to many causes the year 1896 was the most trying one I have experienced since I began to excavate. The beginning of it found us in Jerusalem with only a few days of work to be done before we should close for the winter, but so uncertain was the weather that we had to snatch a day here and a day there from the storms and we could not get off before January 22nd. The very day after our return in March, our valued foreman, Abu Selim, was taken ill with pneumonia and died a week after. Yusif, our servant, was put in as foreman, but how we missed the tall commanding figure of Abu Selim, and his cheery welcome whenever we visited the shafts! The rainy season was very late and continued to interrupt our work. Then came the second sudden blow—the death of Ibrahim Effendi, our Commissioner. Fortunately we were able to keep the post in the family of the Khaldi to whom the excavations owe so much, and the son of Ibrahim Effendi was appointed. Showkat

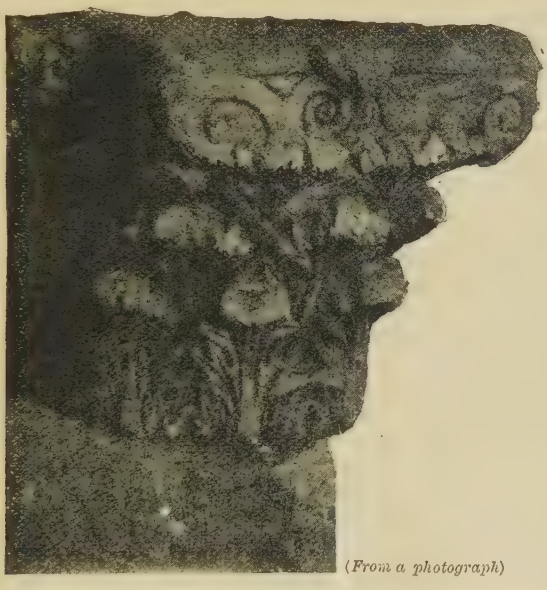
Effendi has carried on the admirable traditions of his father, and has always shown himself anxious to serve our interests.

By the end of April we had at last settled down to steady work which we hoped to continue without interruption through the year, but the last day of our permit came on May 12th, and the notice of its renewal had not arrived! Then followed a period of waiting, writing, telegraphing, far more wearing than the hardest work. Meanwhile came the attack upon us, resulting in the breaking of Mr. Dickie's arm. I preferred to stick to the camp, but the weather had become terribly hot, and I found that a tent was no place for literary work in the middle of a summer's day. The delay grew more and more tantalising. The workmen were waiting, the tools were at hand, the weather was propitious, the clues were waiting to be unravelled—and yet we could not work.

With the permission to continue, which arrived in July, our luck changed. By increasing the number of shafts we were able to make up for lost time. Important discoveries at once begun to cheer us. After a while Mr. Dickie was able to return to camp and to work. Yusif soon showed a gratifying aptitude for his new responsibilities, and, notwithstanding his youthfulness, secured the respect of the workmen. The mantle of Abu Selim seems to have fallen upon him. He shows true interest in the work, and amuses himself—and us!—by making plans on paper, mixing ground-plan and elevations in the manner of the ancient geographers. He follows a clue with the instinct of an archæological fox-hound, but his enthusiasm fails to bear him up when we are seeking to prove a negative. To this scientific height his spirit does not rise, and he hails with an instantly reviving interest the orders to stop work on a long tunnel that has yielded no positive results. In this interest the workmen share. Whether they find a building or not their pay is the same, but when following an important clue they work with increased vigour. Indeed they are often quite disheartened when a shaft proves unsuccessful. The excavation of the Great Scarp, the Steps, and the Church, all within the same limited area, involved a honey-combing of the ground, but I am happy not to chronicle a single accident. Once a supposed crack in the side of a shaft threatened to produce a panic, which was averted by changing the head of the gang. The brave Ahmed was called from another tunnel, and his superb scorn of the supposed danger proved an effectual discipline. The Byzantine Church attracted numerous visitors, especially of the ecclesiastical orders, and as this could be approached at one point by a hole in the terrace, we were obliged to keep a guard at this entrance on Sundays. As we were working in a field held in common by the people of Siloam, we agreed to clear the Pool of a lot of rubbish which had fallen in, and further gratified them by facilitating the approach to the opening of the tunnel. This helped our work in many ways.

Thanks to the kindness of Père Germer, our camp was pitched in the land of the Augustinians, but we hired a little one-roomed house, with a cellar below, situated on the slope of the western hill some 150 feet

above the Old Pool, and just within the line of the ancient city wall. Here we stored our wooden frames, and kept our few antiquities, and here Mr. Dickie drew his plans. On hot days, when the tents became unbearable, we lunched in this upper room. From the door we could look up the Valley of Hinnom, from one window down upon Bir Ayûb, and from another we could see our shafts in the Tyropœon and on the eastern hill. We were thus within instant call if anything important turned up between our regular visits. When the rains drove us to the hotel, Yusif and our servant moved to this room, where every evening a number of Siloam people sat and drank coffee. These little receptions



(*From a photograph*)

Capital from the Byzantine Church found in the Excavations at the Pool of Siloam.

had their value in establishing friendly relations with the owners of cauliflower and cabbage upon which we had designs. I look forward to some distant day when I may visit Jerusalem and walk the streets without having to eye everyone I meet as a possible owner of vegetables.

The work began at sunrise. As a rule we did not visit the excavations till after the half-hour's break for the men's breakfast at eight o'clock. Then all the shafts were visited, and various practical matters discussed with the foreman—the shoring up of a bad tunnel, the obstinacy (from our point of view) of some landowner uninterested in Jerusalem topography ; the best (and cheapest) method of awakening such an interest ; the laziness of some workmen.

Then followed lunch and a little rest, often interrupted by a summons to the work. Then another regular visit to the shafts, and perhaps the sudden giving out of a clue and the starting of new work. Often as we were just leaving the excavations for the day, a bevy of visitors would turn up, who required particular attention, and whom we were glad to see, though the hour might be untimely. On moonlight nights, dining in camp is delightful. Our tents were watched by a negro guard and a dog; these were really meant to watch each other. For the guard was instructed not to let the dog bark and disturb our slumbers; and the dog was instructed to bark whenever the guard showed signs of somnolence. Hence we were, on the whole, pretty well guarded.

In reviewing the work done during the last year, as well as all our work done since we began to dig at Jerusalem, there is one great regret. With the exception of a few remains, all our discoveries, achieved by arduous work of tunnelling, have been covered up again. Walls and towers, streets and mosaics, unseen and forgotten for centuries, have, during the last three years, been once more looked upon by a few observers, and again have been buried under the soil. Since the double wall on the western hill was excavated, a crop of barley has been sown and reaped in the ground which again covers it. I never fail to feel a sort of melancholy when I give the orders to repack the tunnels and to fill the shafts level with the surrounding fields. The one satisfaction is that it is safer to leave these ancient remains under the protecting cover of *débris*, than to irresponsible landowners, who would see in these monumental stones only material for building walls and houses. It is a comfort to feel that the Crusading Tower, found in the land of the Augustinians, has been left open, and is being carefully protected by the proprietors.

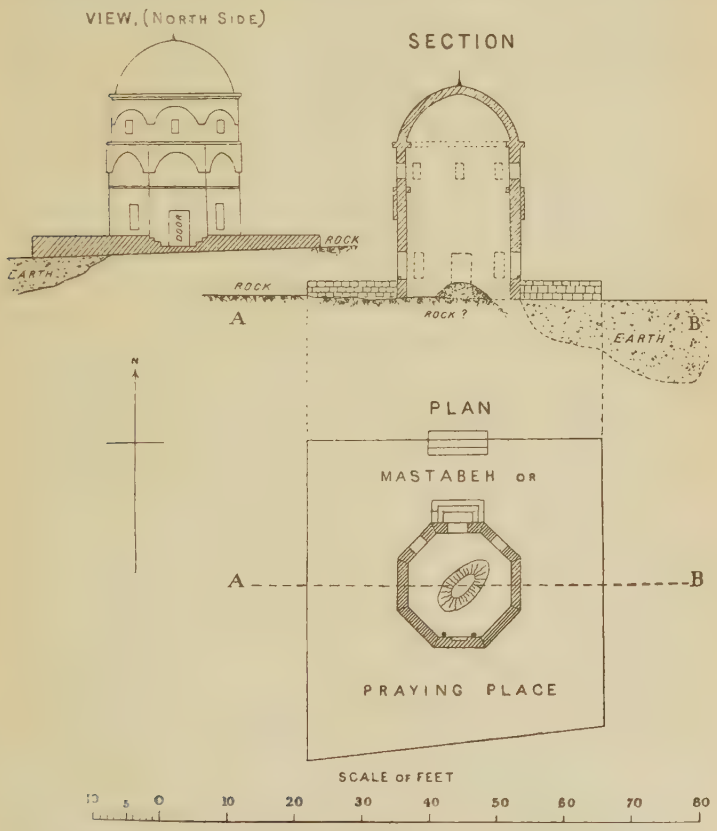
Beirût, *February 20th*, 1897.

REPORTS AND PAPERS BY DR. CONRAD SCHICK.

I.—The Kubbet "Shekfee Sakhra."

Also called the "Little Sakhra," in the Haram es Sherif, Jerusalem.

In the plan of the Haram es Sherif—scale $\frac{1}{500}$ of the Ordnance Survey of Jerusalem—appears in the north-western part of the Area, just where the rock surface ends towards the east, a building standing on a *mastabeh*,



Plan, Section, and Side View of the "Kubbet Shekfee Sakhra."

or place of prayer, which is entered in all the plans hitherto seen, and also in Sir Charles Warren's portfolio. The Rev. J. E. Hanauer also, when speaking on some things in its neighbourhood, has entered it in his

little plan (*see Quarterly Statement*, 1891, p. 206), just north of the little arrow.

This building has some interest, and as I have hitherto not met with any account of it, it may be well to say something in explaining the accompanying plan and section of it, &c. The building is eight-sided and covered with a dome, so that one is reminded of the large dome of the "Kubbet es Sakhra," both by its form and also by its name. I was always told that it is called the dome of the "Shekfee," or piece of the Sakhra; but some call it the "Little Sakhra." Also I was told that when Nebuchadnezzar had destroyed Jerusalem and the Solomonic Temple, he took off a piece from the holy rock (the Sakhra) and carried it with him to Babylon, and that the Jews when returning from Babylon to Jerusalem brought it with them again to the temple place, and that it is now kept in this dome, and hence its name. All my endeavours to examine it were in vain, as I always found the door locked, and the people making the excuse of having no key to it. So I was not sure whether the tale is true or not, as I found no notice of it in any book, whether guide-books or the works of scholars, German or English. This dome is not even mentioned, although all the other domes, large and small, have their history. Recently I visited the Haram with a party, and coming in the neighbourhood of this building, I saw that the shutter of one of the windows was broken, and also the glass panes inside, so that one could look into the interior.

I saw a rock cropping out from the paved flooring about $2\frac{1}{2}$ feet high, about 4 feet wide, and from 7 to 8 feet long, the corners not sharp, but rounded, and in elevation also not perpendicular, but of an arched or round shape, as shown in the accompanying diagram. It is plainly not a separate stone, but part of the living rock, worked down to this shape at the east end of the rock, which is here levelled down to the present surface of the Area. For what reason it was originally made is difficult to say. Was here in former times some holy site? or had it any other meaning? We cannot tell. But I think it was inside the castle of Antonia built by Herod, and very likely under this projecting rock may be the entrance to the hidden underground passage made by Herod, to go from Antonia to the eastern gate of the Inner Temple (Josephus, "Antiquities," xv, 11, 7), of which no trace hitherto has been found; for the construction of which certainly the old masonry of the ancient city wall and the sheep-gate (Neh. iii, 1) were utilised. On those, according to my idea, the north-western cloister or porches stood (Josephus, "Wars," vi, 2, 9), not on the western embracing wall, nor on the northern, but more east, about the end of the very tower of Antonia (not its courts), and hence was properly called "north-western" (*see* my plan, *Quarterly Statement*, 1893, p. 191).

With regard to the dome or building erected over the "Little Sakhra," it is striking to find that the rotunda of the large Sakhra is four times larger and higher, and that even the various parts of it are to some degree represented on the outside of the little Sakhra

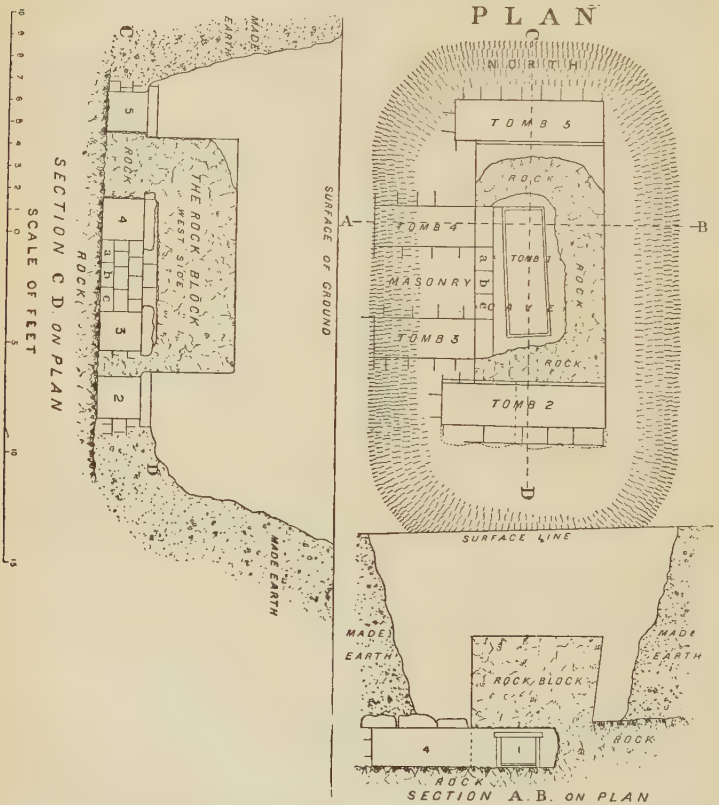
building. From the arrangement of the entrance to the Little Sakhra, it can be seen that it was erected before the *mastabeh* or elevated prayer-place was added to it, and that the shape of the dome is similar to that on St. Sophia at Constantinople. According to Tobler, "Topographie von Jerusalem," i, Berlin, 1853, p. 598, there stood once in the north-western part of the Haram Area on the living rock a dome, where Solomon prayed when the Temple was completed, and was called the Kubbet Solomon. May this perhaps mean the dome of the little Sakhra?

Wild, in 1608 A.D., writes: "On the side of the Temple (the platform with the Kubbet es Sakhra) stands a small chapel, in which is a stone like an altar covered with a fine carpet. In it are burning a few lamps, and there one can get cool and good water from a place (near) which the Moslems call Sebîl" (Tobler, *ibid.*, i, p. 396). Such a sebîl is west of it near the "Bab en Nazir." Perhaps Wild meant this dome of the little Sakhra, as there was a stone in it.

II.—Newly-discovered Rock Block with Tombs.

Outside the Damascus Gate, the made earth lying there in great quantity is being gradually removed, and carried off by donkeys to places where building is going on or gardens are being planted. Five hundred feet distant from the gate, in a N.N.E. direction, a remarkable rock block connected with some tombs was recently discovered. It is about 50 feet south of the cistern marked No. 2 in the plan in the *Quarterly Statement*, 1890, p. 9, in the open field, or south-west of the house marked in the map in the *Quarterly Statement*, 1895, p. 30, about 300 feet north of the city wall. About 4½ or 5 feet under the present surface of the ground, the rock—or, as was first thought, a large stone—was met with, quite flat and horizontal, on its upper surface; when clearing the earth away the workmen found an edge or the end of it, and afterwards also the other end. It is of an oblong form, 10 feet 6 inches long, and at the south part 6 feet broad, at the north 5 feet 9 inches. Working down on its sides there were found, at a depth of 3 feet 10 inches, covering stones, ·8 inch thick and 3 feet long, and, on an average, nearly 2 feet broad; these were four in number, and on lifting them up a tomb was found (No. 2) underneath, the sides towards the south and west consisting of masonry, with mould and some bones, amongst them two skulls. On the east side were found only several hewn stones mixed with the earth, and at a depth of 4 feet the levelled rock. On the west were found two tombs, which, in order to be long enough for a body, enter for more than one foot into the rock block at their eastern ends. The greater part of their long sides (Nos. 3 and 4) is masonry, so that the space between them is a block of masonry, the upper layer of it consisting of hewn stones, against which the covering stones (of the same size as at No. 2) were put; in the north a similar tomb was found (No. 5), its sides towards the north and west being masonry, towards

the east and south rock. Under the rock block itself is a kind of cave, completely empty, except for some mould and bones. It is only 2 feet high the bottom and the three sides are rock (as shown in Plan, No. 1), but the fourth or western side is masonry. So the space was once a kind of cave open on the west side, and when the body had been put in it was walled up in such a way that spaces for parts of the tombs (Nos. 3 and 4)



Plan and Sections of Rock Block, with Tombs, outside the Damascus Gate.

were left. In the mould of the cave several articles were found, from which it is quite clear that the body of No. 1 was put there in a wooden coffin, for there were found four angles, of copper or brass—I cannot tell which, for they are nearly corroded through, and fall to pieces when handled. I send drawings of the articles found. Besides the four angles, once nailed on the corners outside the coffin, there were found

four brass rings still hanging in their fastenings, which latter were riveted, and by this it was seen that the wood of the coffin was only from half to three-quarters of an inch thick. Each fastening had a rosette, which had been fastened to the wood with six nails. All the nails had high and ball-like heads, as well on the rosettes as those of the angles. The shape of the coffin we cannot tell, only that on account of the low space in the cave its cover must have been flat, and that it must have been for the body of an adult. Also a ring fit for a large finger, which was found, proves the same. The hope that the ring was gold proved vain; it is of bronze, hard, and of a whitish-red colour. That this tomb (No. 1) was the principal one is quite clear. But of what person? We cannot say. To me it appears that these tombs are Christian, and probably not so very ancient, falling in the Middle Ages, as also the articles found would indicate. We did not find any writing, nor any mark of a cross. That the rock was cut as the *pedestal of a monument* is quite clear, and that there was such a monument was proved by the many hewn stones found round about, but the best ones, with mouldings, were missing; probably they had been used at a later time elsewhere. What kind of monument it may have been one cannot say. At the northern end of the upper surface of the rock block the two upper corners have been taken away, and so rounded; the building on the surface cannot have extended to there, but must have stood just over the cave. There are some indications that more tombs may be found, especially towards the south—perhaps also in the north, but there is still much earth to be removed before anything can be stated definitely. Under the earth in this field, which the proprietor wishes to sell, many other things may be found. These tombs are only about 400 feet south of the so-called Gordon's Tomb, or the new Holy Sepulchre; and the mangers of the former *Asnerie* are just between them, in about the middle. As the contour of elevation is here 2,509 feet above the sea, the top of this rock block will be about 2,504 feet, or about the same level as the old surface of the ground at the foot of the scarp of Gordon's Tomb.

III.—The West Wall of the Pool of Hezekiah.

On the west side of the so-called "Pool of Hezekiah" or "Birket Hammam el Batrâk" is a very high wall without any window, to a considerable height, and on it there are rooms in three storeys, one above the other. This wall, especially the solid lower part of it, has not been repaired for more than 50 years. The houses upon it are divided into three separate tenements with different proprietors; the southern part belongs to the Greek Convent, and has the entrance from the south, the two northern to Roman Catholic families, and these have the entrances from the crooked road on the west. Some months ago the proprietor of the middle house made some alterations and repairs, removing old bad portions of masonry and inserting new ones. During this work cracks

already observed before in the vaultings became larger and wider, so it was necessary to provide some remedy. Cracks opened also in the other two houses in the three storeys, and the wall in the middle storey showed a considerable bulge outwards as if the whole would soon fall down into the pool. As the neighbours brought an accusation against the man who had done the repairs, I was called to give my opinion on the matter, and I advised them to break down the rooms, at least the outer half of them, and the wall also, and build them up again in a good and lasting manner. But they, or their workmen, were wiser, and put up in the pool scaffolding in order only to repair the wall; but one night a great piece of the wall, not the rooms over it, fell and smashed the scaffolding, so they were obliged to break down the rooms of the top storey, and half of the two others, and the wall till they came to firm ground, which was *rock*. The level of it was about 6 feet above the surface or bottom of the pool, then it had an offset $2\frac{1}{2}$ feet backwards forming again a scarp, and on it a very strong old wall; so the rock is elevated about (on an average) 13 feet[1]

above the surface of the pool. The wall standing on the lower scarp was apparently built later and with much smaller stones than the higher one. If this latter had not existed the wall would many years back have fallen by the weight and pressure of the many vaultings. The old one gave strength to the whole. The outer and weaker one was most likely built when the rooms were erected, and this middle part is the oldest; for when the other rooms in the north and south were built there were, at a height of about 24 feet, half-arches built striking the already existing middle wall, as above.

And hence this middle wall, being the oldest, was much more decayed than the others. I observed that the middle wall had once a door; very likely steps were coming down here, as the rocky flooring of the pool is here higher than the main level, forming a kind of hillock. As far as I could ascertain, there is behind the old wall (which is not very high) and upon it a layer of earth about 10 to 12 feet high, on which the rooms are standing. The level of the crooked street on the west is, according to the $\frac{1}{2500}$ Ordnance Survey map, 2,536 feet above the sea, and the level of the

[1] Say, with the levelling masonry, 15 feet.

pool about 2,494 feet, a difference of 42 feet. Of this the lowest storey takes 14 feet, steps leading down to their floorings; the pavement and layer of earth is from 12 to 15 feet; or, say, rock basement, 15 feet; earth, very likely formerly a row of rooms which have become destroyed and their space filled up with the *débris*, 13 feet; the new storey which was erected on the old one, and is now the lowest of the three, 14 feet, making up the 42 feet. The two upper storeys rise above the level of the crooked street. So we have here a specimen how matters were arranged when building on *débris* or ruined rooms. It was a mistake that the people erected such a high wall perpendicular and on different bases. The upper roofs of these buildings are more than 70 feet above the bottom of the pool.

IV.—The Church at the Pool of Siloah.

A few weeks ago Dr. F. Bliss came to me saying that he had by his excavations at the Pool of Siloah recently found the traces of a church, and that I should come down to see it. Accordingly I did so, after a few days, and saw there the traces of a regular apse of a former church. Dr. Bliss will, of course, report in full on this matter, and what I wish to do is simply to speak of the church from an historical point of view. That there was once a church here is mentioned, as far as I know, in all the guide-books. It is generally called a *basilica*, connected with a monastery. In the "Survey of Western Palestine," Jerusalem Volume, p. 13, it is said: "The Pool of Siloam appears also to have been at one time covered by a building, which is called a church by Antony of Piacenza, about 600 A.D." Professor H. Lewis, in his book, "The Holy Places of Jerusalem," London, 1888, p. 123, says: "There was once a church over it or near to it, but that has long since been swept away. No Moslem mosque or place of prayer has succeeded it, and the place is left solitary and unguarded, lying so quietly hidden away in the narrow valley, aside from the road, that the traveller would pass it unnoticed were he not directed to it." Dr. T. Tobler in his "Topography," vol. ii, p. 26, and Dr. Sepp in "Jerusalem und das heilige Land," Schaffhausen, 1873, vol. i, p. 336, mention "that in 600 A.D. there were here a church and baths connected with it for both sexes, divided by a partition."

I could cite more, but this is enough to show that all writers, as it seems, grounded their statements on Antoninus's report or copying one from the other. Now Antoninus Martyr, par. 24 (Pal. Pil. Text Soc. Trans., p. 21), gives the following report: "Descending from that arch—'where was the ancient gate of the city'—down to the fountain of Siloam by many steps, we saw the round church from beneath which Siloe rises. This church has two baths, made by the hands of man out of marble; between the two baths runs a partition, in the one men and in the other women bathe for a blessing. In these waters many cures are effected, and even lepers are cleansed. Before the atrium of the

church is a large pool formed by the hands of man, in which the people bathe continually." And par. 25: "The fountain of Siloe is at the present day within the walls of the city, because the Empress Eudocia herself added these walls to the city." For about 500 years after Antoninus we hear nothing of this place or of a church, till the times of the crusades, when a church was again built or the former one, which had fallen into decay, was restored, and is mentioned by many pilgrims. We wish now to ask: Who built the first church which Antoninus saw? In answering this question, one must contemplate the general history of Jerusalem. According to the Paschal Chronicle, the Roman Emperor Hadrian built at the rebuilding of the city wall, etc., also a "tetranymphon," which I think clearly refers to Siloah—the ancient bathing place of the Jews, and means perhaps nothing else than the restoring of the baths and romanising them—but the church there he did not build. Two hundred years later, 333 A.D., the Bordeaux, or anonymous pilgrim, when visiting the holy sites, remarks: "As you come out of Jerusalem" (by the so-called Dung-gate, situated in Hadrian's city wall, where it stands even to-day), "to go up Mount Sion" (the present Neby Daûd), "on the left hand, below in the valley, beside the wall is a pool which is called Siloe, and has four porticoes, and there is another large pool outside it" (Pal. Pil. Text Soc. Trans., p. 21). A church he does not mention, so it could not have existed at that time. Eusebius and Jerome speak of the waters of Siloa, but they also do not mention a church. Eucherius about 427–440 A.D. mentions Siloa and its waters, but he also says nothing of a church (Jer. Vol., p. 18), and as some 160 years later, or 600 A.D., there was a church, it must have been built within this time. Now, as about 450 A.D. the Empress Eudocia built city walls, at least on the south side, to bring in all the holy sites and also the waters of Siloam, we may justly suppose that she at the same time built also this church. The name of it is not mentioned, but very likely the old name "Siloah" was retained. This church Antoninus calls a round one, although the word *basilica* is more properly applied to a square-shaped building. As it was not actually over the pool, but over the source of the wall, and so somewhat north of the pool and in a higher position on the rock itself, in which is the cleft which forms the spring or fountain, I think there was left an opening in the floor of the church, that the water might be seen below, and drawn up with buckets when wanted. So a round church was not unreasonable, with the well mouth in the middle, like the tomb in the Anastasis Church, which had been built about 100 years before, and like the round Church of the Ascension on Mount Olivet, which has the last footprints of our Lord in the middle, or the present Kubbet es Sakhrah in the Haram es Sherif, which has the holy rock in the middle beneath it. Still it seems to me this round Siloa Church was not large but rather very moderate in size. It was not intended for large assemblies, but for daily visitors; so a small one answered as well as a large one, and the bathing places were in front—south of it, at the pools.

Now what Dr. Bliss has found points not to a round but to a square church. So I think that after it had stood for a century, Justinian, perhaps, restored it, making it perhaps also larger, for Procopius (Pal. Pil. Text Soc. Trans. of "Constantine's Buildings," London, 1886, p. 138 and following), after speaking of the Church of Theotokor, or the buildings on the Haram es Sherif, goes on to say (in chap. ix): "In Jerusalem he (the emperor) restored the following monasteries: St. Thalelæus, St. Gregorius, and St. Panteleemon, in the desert of Jordan; the Hospice at Jericho; the Church of the Virgin at Jericho" (all these seem to me to be places in the wilderness and in the Jordan plain, Elisha's fountain not being mentioned. The account now goes to Jerusalem); "the Church of the Iberians at Jerusalem; the Church of the Lazi in the desert of Jerusalem" (meaning the Church of Lazarus at Bethany); "the Church of Mary in the Mount of Olives; the Church of the Well of St. Elisæus" (this means certainly the church on the fountain of Siloa, as there is no other church on a fountain or well at the holy city, except Siloa. It may be that Procopius did not know any saint with the name of Siloa, and, not knowing the well itself was so called, mentioned a name in some degree similar to Siloa, viz., "St. Elisæus");[1] "the Church of Siletheus; the Church of the Abbot Romanus." So I am convinced that Justinian restored, and perhaps also enlarged, the church and monastery at Siloah, in the middle of the sixth century, and this was the church seen by Antoninus in about 600 A.D. as described above.

Having shown that this early church at Siloah was originally built by the Empress Eudocia, and probably afterwards repaired and perhaps enlarged by Justinian, the statement of Nicephorus, in his "Ecclesiastical History," ascribing this building to St. Helena, has no value, as he wrote about 1,000 years after, and ascribed to Helena so many other ecclesiastical buildings which it can be easily proved that she did not build, as is the case with this one. Not many years after Antoninus had seen this church it was destroyed in 614 A.D. by the Charasmians, under Chosros II, who destroyed all the churches outside the city wall, and certainly this one, as they had to come often there for water. It was not built up again soon, and we hear for 500 years nothing of a church, although the Pool of Siloa is mentioned by Bernard the Monk, 865 A.D. Saewulf, 1102 A.D., visited Siloa, and says: "The fountain which is called the Pool of Siloe, where, at our Lord's command, the man born blind washed his eyes, our Lord having first made clay with his own spittle and anointed his eyes" (Pal. Pil. Text Soc. Trans., p. 19), not mentioning any church there, so it is clear that at that time it had not been rebuilt.

[1] Dr. Bliss has suggested that as Elisha cured the spring at Jericho (2 Kings ii, 19–22), very likely in the early Christian time he was looked upon as the Saint and protector of the Spring of Siloah, and so his name, Elisæus, applies to the church erected over it.

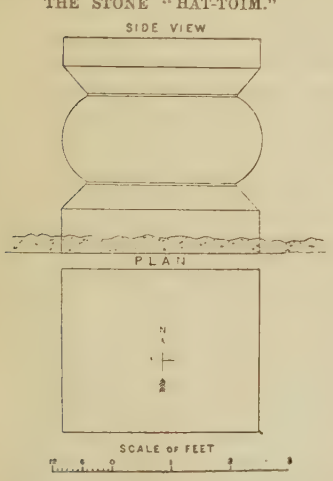
Four years later the Abbot Daniel, 1106 A.D., says: "Further south, at the foot of the mountain, is the Pool of Siloe, where Christ opened the eyes of the blind man" (Pal. Pil. Text Soc. Trans., p. 38), mentioning no church. Carmoly, 442, according to Tobler ("Die Siloahquelle und der Oelberg," p. 26), mentions later that there was a square, convent-like building, in which in the night a small rivulet of water was gathered, meaning apparently the pool with its side buildings, the porches formerly mentioned; and Benjamin of Tudela, 1160–73 A.D., says that over the Spring of Siloah, which runs into the brook Kidron, "is a large building erected in the times of our forefathers." About 10 years later Phocas speaks of "arches and numerous columns," but does not describe the place or mention a church. This was near to the end of the Christian kingdom, so it seems that the Crusaders had not done very much here, nor built a new large church, as they had done elsewhere. The place had been already for centuries outside the walls again, and so not properly protected, and it was on low ground. They had built, as appears from Fabri's report, a kind of convent, in which they had certainly a place of worship or a church, but it was soon neglected, and probably uninhabited, keeping in repair what they have found and adding bye-and-bye some more. Fabri, in 1483 A.D., says: "The Christians who came after them (the Romans) built them" (the walls which embraced the pool and its neighbourhood) "up again, and devout men built themselves dwellings round about them, and built a sort of monastery above the fountain, as may be seen this day, for in front of the fountain there is a pool like a bath, and it is set about with walls and vaults like the passages round a cloister, and the arches of the roofs rest upon marble columns. This building is partly in ruins, and the remainder threatens to fall into ruin also. It would be an easy task to restore the ruins of this holy fountain, but no one touches them or puts his hand to them, and so the place grows day by day more ruinous" (Pal. Pil. Text Soc. Trans., vol. i, p. 529). Twenty years later the place was described as surrounded by a wall with an entrance, and there were still pillars, arches, and even some paintings. The latter can have been only in the ruins of the former church, and indicate that it came down from the Byzantine time. I do not think that the Crusaders had time enough to make paintings here. In 1519 A.D. Tshudi also says that there was once a convent, of which the cloister is still standing, and many walls. This cloister, or at least some part of it, Dr. Bliss has now found, and some walls also, especially those of the church. At the end of the sixteenth century some masonry could still be seen, which in the following 300 years became fully buried under the made earth and rubbish, until to-day the noble Exploration Fund looked for it by the spade. Although it was covered up, yet Della Valle in 1614, and Troilo in 1666, and others, supposed that there was once a church close to the pool; also Maundrell, 1697, says the same, that the pool "was anciently dignified with a church built over it" ("Early Travels in Palestine," Bohn, p. 469).

As there are on the eastern side of the pool some pillars still standing, others lying on the ground, it was supposed that the church had stood over the pool itself, an idea I could never agree with. The span of the arch (or vault) would at least have been 20 feet and 10 feet high. Such a tunnel, arch, or even a cross vault, these pillars could not bear, and a wooden cover or roofing over the pool to be the flooring of the church is not to be thought of. The question is now settled by the result of recent excavations, and when the ancient writer said "over the pool," it meant close by and on a higher level, and the expressions were correct. In regard to the two or three (?) steps or small stone benches going round the apse of the ancient church, I wish to remark that such were also found in other churches, and, above all, in the church of the Holy Sepulchre itself, where there are four such steps (besides those in the thickness of the wall). I have also to remark that during the Christian Kingdom, and for a time afterwards, the church was called or dedicated to Salvator Illuminator, the light-giving Saviour, in remembrance of John ix, 1–14.

V.—The Stone "Hat-Toîm."

In the publications of the German Palestine Society, Professor Sepp speaks of this stone as being in the cellar of the convent of the Sisters of Zion, and brings it in connection with the fine pavement there, about a man's height under the present surface of the ground, and a translation of his paper appeared in the *Quarterly Statement*, 1879, p. 195. Mr. J. M. Tenz also, in the *Quarterly Statement*, 1893, p. 330, speaks of it and of the pavement. But in neither of these papers is the stone properly described. Both gentlemen speak of *two* stones, whereas there was shown to me some years ago (also in the cellar) only *one*, and of a form different, as it seems, from those seen by Professor Sepp, who calls them "a couple of stone cylinders of solid rock." What I found was a heavy block put there, of a square form and with some mouldings, as shown in the plan drawn according to the measurements which I made on the stone. The passages of the Talmud which are quoted speak of the stone in the singular and not the plural, so I think there was only one, and not a "cylinder," but of a square form, more convenient to stand on, and this the more so as it is from east to west wider than from south to north, as

THE STONE "HAT-TOÎM."



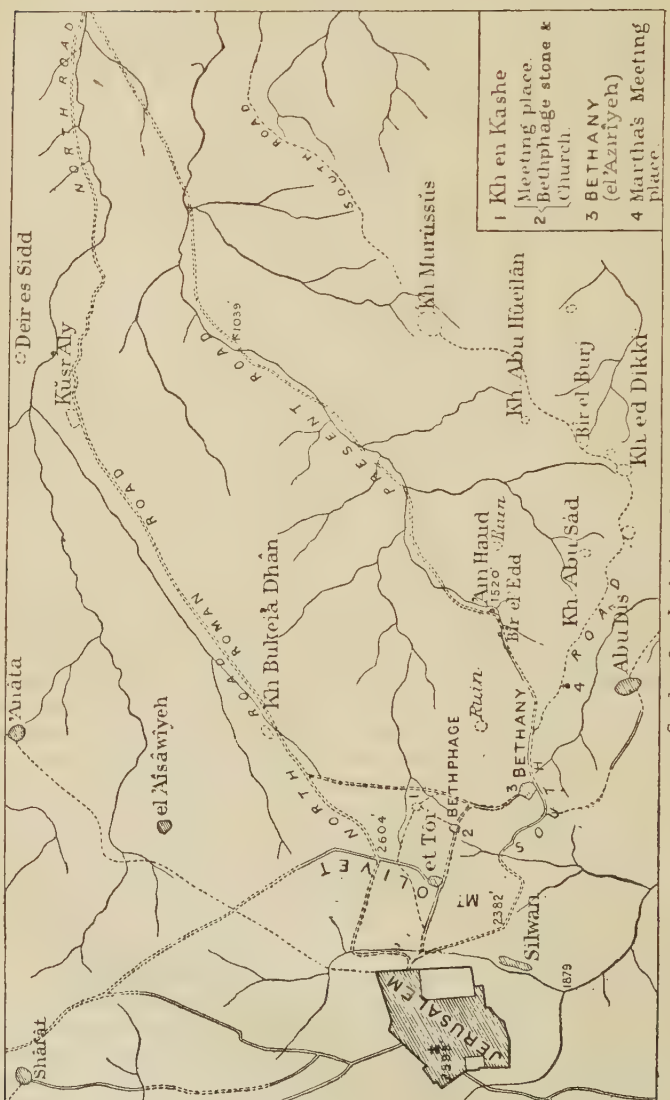
shown in the plan. The upper surface is quite level. Its lower part stands on the pavement, and Mr. Tenz also testifies this, so it cannot be "solid (or living) rock." But perhaps Professor Sepp means by this a piece of rock—solid, and not made up by masonry. What I state is simply that the reader shall not pick up a wrong idea of this stone.

VI.—The Site of the Ascension of Our Lord.

When last year I examined the little Chapel of the Ascension and its environs, and the whole village et Tur on Mount Olivet, I looked afterwards in many books bearing on the subject, and found that several writers doubt the site on Mount Olivet, thinking the ascension to have taken place near Bethany, as St. Luke xxiv, 50, says: "And he led them out as far as to Bethany, and he lifted up his hands, and blessed them. And it came to pass, while he blessed them, he was parted from them, and carried up into heaven." So they say the site of the departure of our Lord must have taken place near Bethany, and was certainly not on the top of Mount Olivet. But I wish to remark, the very same Evangelist, in telling us again the history of the ascension, gives some details not mentioned in his gospel, as he closes it by saying (Acts i, 12): "Then"—after the ascension and the speech of the two heavenly men—"they" (the disciples) "returned to Jerusalem from the Mount called Olivet, which is from Jerusalem a Sabbath day's journey." This gives the idea that the site of the ascension was on the *top* of the Mountain of Olivet and one Sabbath day's journey distant from Jerusalem. Other parts, especially those near Bethany, are distant more than a Sabbath day's journey. The road from the eastern wall of the city down into the Kidron Valley and up again to the top of the mountain is 3,000 feet or 2,000 cubits, or a Sabbath day's journey. Further, it is not likely that St. Luke contradicted himself, nor has it to be considered so. Both sayings will be right. According to my humble understanding Jesus was the last time in the midst of his disciples assembled in the "upper room" (Acts i, 4, compared with v, 13), as there was the lodging of "both Peter and James and John, and Andrew, Philip, and Thomas, Bartholomew and Matthew, James the son of Alphæus, Simon Zelotes and Judas the brother of James." So we see that the "upper room" was the general assembling place of the apostles and other disciples; "also the mother of Jesus, and his brethren." There Jesus was speaking to them on the matter of the Kingdom of God, going out with them from the city towards Bethany, the very road he passed so often with them before his sufferings, death, and resurrection. Crossing the lower bridge of the Kidron, and ascending the slope of Mount Olivet, went eastwards, taking there the so-called lower (or southern) road, now the carriage road, being even at that time a broad road, not a narrow path, so that his disciples might have walked around him and hear clearly all his final words. Coming to the Mount, on the eastern slope of which Bethany is situated, and hence already in the neighbourhood of the village, or as

St. Luke says (xxiv, 50), "as far as to Bethany," he left the main road, going up the hill by a side road to the place where he, some weeks before, had mounted the ass (the present Bethphage), crossing the Bethany-Jerusalem road there, then went further north and upwards as far as to the Jericho road, going over the top of the Mount of Olives, and for a short distance westwards of it, till the Holy City became visible; when he stopped, stretched "out his hands and blessed them," in the meantime rising into the air, first in a somewhat declining line, so that the disciples could properly see the rising, which would not have been the case when rising from the standing ground perpendicularly upwards. The Lord looking towards his disciples northwards, and the latter towards the departing Lord, southwards, so that when at a greater height, but still well visible, the Lord appeared to be just *over the top of the mount*, where at that time some buildings stood, and afterwards the Ascension Church was erected, a place from the earliest Christian time always considered and venerated as the site of the ascension of the Lord. Now at once a cloud took him up, and the disciples could no more see him, but still gazing to heaven, they heard a voice behind them saying: "Ye men of Galilee, why stand ye gazing up into heaven?" Turning then at once, they saw near them, "two men in white apparel," declaring to them that "this same Jesus, which is taken up from you into heaven, shall so come in like manner as ye have seen him go into heaven" (Acts i,' 10, 11). Now they fell down to the ground "and worshipped him," no more as their Master but as their Lord and God, and returned with great joy to Jerusalem, assembling again in the "upper room," praying and praising God, and also in the Temple, at the proper hours (Luke xxiv, 53). The two men in "white apparel" I think were Moses and Elias, as may be inferred from Luke ix, 30. By such an explanation both places, Bethany and the ridge or top of the Mount of Olives, come to be right. That Jesus made his last walk with his disciples to Bethany is very credible, and that the Lord went to his eternal glory in view of the place of his deepest humility, is most probable. With regard to the wanderings of our Lord from one place to another before leaving the earth, the same is narrated of Elijah before he was taken up to heaven (2 Kings ii, 1–11). What the Evangelist St. Luke said in few words in his gospel mentioning Bethany, he completed in the first chapter of the Acts of the Apostles. In the first centuries the Christians certainly *knew* the site of the ascension, and celebrated it from the beginning at the top of Mount Olivet. They knew the gospels, and would certainly have celebrated the site of the ascension near Bethany if it had happened there. St. Luke also would have said the disciples returned from there (Bethany or the spot near there) with joy to Jerusalem. Why does he mention the Mount of Olives and state the distance if the ascension did not take place on the mount but near Bethany? For me there is no doubt that the ascension took place on the *top of Mount Olivet*, and *there* Jesus will come and appear again.

PLAN SHEWING ANCIENT ROADS to ILLUSTRATE DR SCHICK'S PAPER.



VII.—Bethphage and Bethany.

The last wanderings of our Lord from Jericho to Jerusalem are told by all the four Evangelists. By two of them, Bethphage and Bethany are mentioned, by the others only Bethany, as if Bethphage were situated east of Bethany, and our Lord came first there and then to Bethany. But, from other reasons, we infer that this was not the case, and that Bethphage was nearer to Jerusalem than Bethany. In looking more closely to this subject, I found various explanations by commentators, all of them not knowing the configuration of the ground and the lines of the various roads leading down to Jericho. A German book says both villages stood in one line, and at the same distance from Jerusalem, and the road passed between them, but a little nearer to Bethphage than Bethany, and hence Bethphage is mentioned first. Others say Bethphage was not a village or city, but a district, its name meaning the place where many figs were growing; and that the Evangelists meant to say that Jesus came into the district of the fig-cultivations, and in it to the village of Bethany. But I think this is not tenable, as from Bethphage the ass was brought the next day, when Jesus went from Bethany to Jerusalem, so it was certainly a village, and not a district. Now all these and other similar explanations are based on the idea that Jesus, with his disciples, came up the very road which is now in general use. But there were in ancient times, as well as to-day, several roads going down from Jerusalem to Jericho. David, in his flight before his rebellious son Absalom, took the nearest road, which leads over the top of Mount Olivet (2 Sam. xv, 30, 32, and xvi, 1,, a road which is put down in the large map of the Exploration Fund. This road passes several small villages, cisterns, &c., and keeps more on the heights, whereas the present one goes most in valleys. Jesus came up from Jericho this northern or direct road, and when coming to the eastern brow (or foot) of the Mount of Olives, and not wishing to go that evening to Jerusalem, but only to Bethany, to stay the night there with his disciples, he left the main road and took a side way towards the south, and after a few minutes he had Bethphage on the right side, beyond a small valley coming down from the south-west, beginning near the road going from Bethany to Jerusalem, which Jesus passed the next day when sending for the ass. Here on the eastern brow of the Mount of Olives, and several minutes south of the main road I have spoken of, is a site of an ancient village or small town. There are rock-hewn pools, cisterns, &c., and 30 years ago I saw there masonry and many marble pieces of former floorings, small pillars, and large pieces of pillar-shafts of common stone, &c., besides pottery and similar things. But now, when recently there, I found all removed except the pools and cisterns, and a fragment of a very large stone dish, and the ground made into a vineyard. This site I think is the place of the ancient Bethphage. The reading of Mark xi, 1, and Luke xix, 29, gives the idea that on the

very same day Jesus sent two disciples to bring the ass, and entered the Holy City amid the hosanna-shouting of the people. But that this was not the case, and that the entry was made not the same evening, but in the forenoon of the following day, appears from John xii, 1, where it is said that six days before the Passover Jesus came to Bethany, and (verse 12) the "next day" he went to Jerusalem, riding on a young ass which he "had found," in order to enter the city as the King of Israel, and fulfil Zechariah ix, 9, and Psalm xxiv, 8. Thus it is quite clear that Jesus, coming to the foot of Mount Olivet, left the main road in the afternoon, went southwards by a path still existing, passed Bethphage about two or three minutes distant on his right hand, and so on to Bethany, staying the night there. The next day, in order to go to Jerusalem, he had for a small distance to go back the same road he had come the evening before, and coming to the point where Bethphage was again in sight, he sent the two disciples to the village situated "over against" the little valley mentioned, and went on with his followers along the road westwards towards Jerusalem. So Matthew xxi, 1, says: "When they drew nigh unto Jerusalem, and were come to Bethphage unto the Mount of Olives, then sent Jesus two disciples." Mark xi, 1, speaks in a more general way, and, taking the events of the evening before and those of the morning together, says "when they came nigh to Jerusalem," unto Bethphage (on the side), and Bethany (behind), He sent the disciples. Luke xix, 29, speaks in a similar way. John xii, 1, 12, only mentions Bethany, from whence Jesus went to Jerusalem, and being on the road (verse 14) "found a young ass, sat thereon, as it is written."

Bethany is situated on the eastern slope of a hill or mountain, lower than the Mount of Olives, but connected with it by a narrow flat ridge. Over this ridge the Bethany Jerusalem road passes, and here comes in also the road from the site of the ancient Bethphage. So, I think, the disciples brought the ass to this spot, and set Him thereon. So it was thought even in ancient times, and the rock from which Jesus mounted the ass was cut into the shape of an altar, and a little church built over it. For many centuries this church was destroyed, and covered with earth, but the traces of it were discovered in 1877 with the altar rock covered with nice paintings, still standing, and showing the scene with the ass, the palm branches, the multitude, and even the raising of Lazarus.[1] The pictures have now, after coming to the open air, disappeared, but the little church is restored, and bears the name of Bethphage. The name of the ancient village Bethphage, situated several minutes north-east lower down the slope, having become destroyed and deserted, was adopted here to the new site. The site of the former Bethphage village bears now no ancient name, but that of the family, the ground being their property. Thus, if we suppose that, in coming up, Jesus took the northern road, and stayed the night at Bethany, all comes right and intelligible, and it is not necessary to

[1] *See* paper by M. Clermont-Ganneau in *Quarterly Statement*, 1878, p. 51.

look for Bethphage in the village et Tur on the top of Mount Olivet, but on its slope, as it must have been, and not, with Dr. Schwarz, in the village Siloah.

VIII.—Jeshimon of the Bible.

Mr. Luncz, a Hebrew scholar here, and editor of several books on Jerusalem and Palestine, came to me a few weeks ago saying that he was about to issue a new edition of a work written by a Hebrew and in the Hebrew language about 600 years ago, on Palestine matters, and that there appears in it "Jeshimon," in the neighbourhood of the Dead Sea. As he wishes to make notes to the statements, and so to bring the book into conformity with the present knowledge of the country, and knowing that I possess a copy of the large map, he begged me to show him the exact place on it. He had brought with him Mr. George Armstrong's "Names and Places in Old and New Testament and Apocrypha," and showed me that on p. 100 Jeshimon is stated to be on the west side of the Dead Sea, but wanted to know the exact position of it. As this book is based, as it seems, on the reduced map, which I do not possess, and finding that the number "14" means the number of the sheet of the reduced map, which, according to the diagram on its first page, embraces the sheets xvii, xviii, xxi, xxii, xxv, xxvi of the large map, I looked to these but did not find the name "Jeshimon" on them, nor in the Memoir, nor in the name lists. So I could give Mr. Luncz no proper answer, but said I would keep the book for a few days and study the matter more in detail. I found the following :—

In the *Quarterly Statement*, 1875, p. 47, I find that Lieut.-Colonel Conder applies this name to a district west of the Dead Sea, and not to a single spot. And when looking to the passages of the Bible (1 Sam. xxiii, 19, 24, and xxvi, 1, 3) such an explanation and identification is quite correct, and most probably the word means there no special site, but a district, and hence all the translations I could get access to give it a "desert,"[1] and not as a town. But the other passages in the Bible where this name "Jeshimon" occurs, viz., Numbers xxi, 20, and xxiii, 28, cannot be applied to the western side of the Dead Sea, but point distinctly to the eastern side and to the northern end of the Dead Sea, near Pisgah, and mean also a town, not only a district, and a much more limited one than that on the western side. I learned from the Jews that the Talmud speaks of it as a mountain from which the Galilean Sea could be seen, which points also to the eastern side, as from the western side that sea could *not* be seen ; the less so, as the *Quarterly Statement*, 1876, p. 123, and 1875, p. 48, declares this Jeshimon district to be situated rather low, and even if it were situated higher the mountains north of Jericho would hinder its being seen, whereas most probably from the top of some mountain west of Pisgah, through the Ghor, or Jordan Valley, one may see the waters of the Galilean Sea. And why could there not be two

[1] *Cf. Quarterly Statement*, 1876, p. 123.

Jeshimons, as in the Bible? Often the same name is applied to places or towns in different parts of the land. So I think there were two Jeshimons, one west and one east of the Dead Sea, and that the latter meant not only a comparatively small district but also a town. We find in Numbers xxxiii, 49, just in this region, a Beth-Jesimoth, and repeated in Joshua xii, 3, which the LXX renders Aisimoth; the Vulgate, B-Simoth; Josephus, Besimoth; Eusebius and Hieronimus, Bethasimoth; Bethsimut, Asymon and domus Isinuth.[1] A name found in Arabic, called now Sûeimeh.[2] A site near the foot of the eastern mountains—once a city, now shapeless ruins, as I saw it some years ago. About 20 minutes from it is a spring close to the foot of the mountain called 'Ain es Sûeimeh; so that we have a spring Jeshimon, a city Jeshimon, and a mountain Jeshimon. The latter is the last projecting corner towards west of the eastern mountains, east of which is Nebo, and all these heights together make Pisgah. Here Balaam, looking northwards, saw the camp of the Israelites (Numbers xxii, 41); and in xxiii, 14, the top of Pisgah is mentioned. West of it was Peor (xxiii, 28), the most western mountain, the declivity of which is called Jeshimon, and at its foot was situated the city Jeshimon, Balaam looking towards it (xxiv, 1), and so further on to the centre of the Holy Land, not as before towards the seven altars. As the word "Jeshimon" is generally translated "wilderness," or "solitude," one might think it cannot be applied to a town, hence also not to Kh. Sûeimeh; but, as I said, this town is no more in the solitude itself, but very near to it at the foot of the mountain, and taking its name from it. That the latter is really a solitude I became convinced in April, 1877. We had many hours to go down from the edge of the heights to 'Ain Sûeimeh, where we pitched our tents and rested the night. I did not see any ruin, or any other mark of the workmanship of men, but beds of sandstones mingled with ferruginous rocks, so that I think this to be the "iron mountain" of which Josephus speaks ("Wars," iv, 8, 2): "In this (the eastern) ridge of mountains there is one, called the Iron Mountain."

IX.

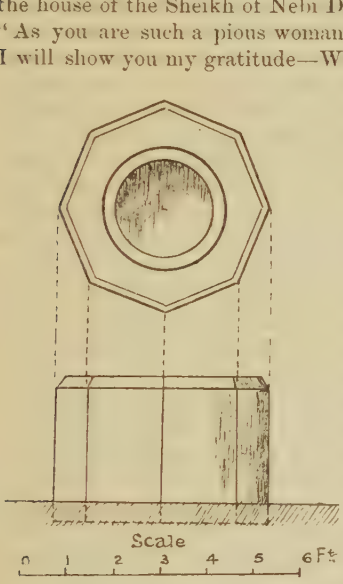
1. *A Remarkable Stone in the Jewish Quarter, Jerusalem.*—Recently I had to see to some houses in the Jewish Quarter, and when passing the "Meidan" I saw that the new pavement is also done there, and that in the midst of the square is a large stone, introduced into the pavement, but rising about 3 feet above it, which I had never seen there before. On making inquiries, I was told that it had been recently brought there from near the Synagogue of the Sephardim. It had there stood in the ground, projecting not much above the surface, so that people could walk over it; but when the street there was graded and lowered the stone came out, and the street being narrow it caused an obstruction, and hence was rolled to the "Meidan," where there is room enough,

[1] Von Strak, "Palästina und Syrien," Berlin, 1894.

[2] "Survey of Eastern Palestine," p. 156.

and now forms a kind of ornament of the otherwise bare place. It is of hard *missy* stone, and looks like a mouth for a well, but it is rather large and heavy. It is eight-sided, about 3 feet, or even more, high, pierced with a round hole, of 2 feet diameter, and has the edges bevelled, but for the greater part broken. The sides are not exactly alike, nor has the stone been smoothed, but looks rough and ancient. I could not detect any marks, or mouldings, or letters.

The people told me a curious legend about it. They said :—In ancient time a pious Jewish woman was often engaged in washing clothes, &c., at the house of the Sheikh of Nebi Daûd. One day the Sheikh said to her : "As you are such a pious woman and always wash our linen so clean, I will show you my gratitude—Would you not like to see the tomb of Nebi Daûd, which no one of your race has seen ?" She answered : "Of course she would be happy, and consider it a special fortune." Then he said : "Now follow me," and went through a long passage to an iron door, which he opened, and when both had entered he went quickly out and locked the door, leaving her alone in a very dark place. Perceiving that the Sheikh had deceived her she trembled for fear, and fell down and prayed to the Lord that He might help her for David's sake. Then she saw an old man shining in his own light, who took her by the hand and led her through long underground passages till they came out from the hole of the above stone, lying at a dunghill very near to the Synagogue, where the old man said : "Now go home to your work, and act as if nothing had happened," and when she wished to thank him she saw him no more. The Sheikh, meanwhile, had gone to the Kady, saying that a Jewish woman went into the Prophet's Tomb, and that, seeing this, he had locked her in. So people went to fetch her to be punished, but they found nobody there, and the Kady, thinking the Sheikh had played a trick, decreed for him the punishment which he had intended for the poor woman. In remembrance of this wonderful deliverance of a Jewish soul, the stone was left there for centuries, until now removed to another place, as told above.



A Remarkable Stone in Jewish Quarter, Jerusalem.

2. *Jeremiah's Grotto Hill.*—At its south-eastern part, on the western slope, they are now quarrying stones, so that the shape of the hill, as given in contours of the Ordnance Survey plan, will be altered, and the former declining surface will become a kind of scarp.

3. *Kedron Valley.*—From the upper to the lower bridge the ground of this valley has been bought by the Roman Catholic or Franciscan Convent of Jerusalem, and they have already made a high wall round about it, extending north and south to the bridges mentioned, and from the road on the east to half-way up the Temple mountain on the west, forming the slope there into several level terraces and planting trees on them. Also a high wall is made on the east side of the (eastern) road, from the "Tomb of Absalom" northwards to the Bethany road.

4. *Siloah Spring.*—In former reports I stated that this spring had become dry for rather a long period, and that the reason could not be explained. Recently I was at the so-called Virgin's Well, and found some water there, but not so much that it could run through the famous tunnel to the pool below: there it was quite dry. A few days afterwards I met some Siloam people, who told me that the water had come, but goes quickly away by some channel elsewhere, and hence did not rise so high that it could run through the tunnel. They wished me to advise them what to do in order to arrest the water. Of course this I do not know, otherwise I would advise them. A few days later a young man of Abou Dis, being a lunatic, fell into the Bîr el 'Edd and lost his life. This name, Bîr el 'Edd, so near Jerusalem, arrested my attention. I had never heard of it before, but found it mentioned in the "Name Lists," p. 288, as "The well of the perennial spring, or the old well (close to 'Ain Haud, the so-called Apostles' Fountain)," but not in the "Memoirs" nor in the map itself. I was told that it is near 'Ain Haud a little higher up, in the same valley, but distinct from the 'Ain Muhendes, that it had formerly only a very little water, and that a Jerusalem Effendi some years ago bought all the land round about there, enclosed it with dry walls, planted vines, &c., and cleared the well, but allowed nobody to take water, so that people were much displeased. But he died, and his plantations became neglected, and are now nearly all wasted, but instead the well gets much water, so that the villagers bring there their cattle to drink, and are all very glad, and thankful to the Almighty—who gives to every one according to his deeds. Hearing all this, the idea at once struck me that here might be the new outlet of the Siloah Well. I looked to the levels and found that the Ordnance Survey gives the level of the Siloah Well (Virgin's Well) 2,087 feet above the sea, and the level mark at the Apostles' Well 1,519 feet 6 inches. So if the Bîr el 'Edd is even 300 feet higher, or even more—say 350 feet—there will be still a difference of 187 feet; so that on this account the Siloah water might run into the Bîr el 'Edd, having a fall of 93 feet in a mile in a straight line.

The people say the water in Bîr el 'Edd is very good, better than that at Siloah, as the latter has a salt taste. This would speak against this idea, and there may be still some other explanation. To make the Bîr el 'Edd usable again, they emptied it, and the next day again, and asked the Sheikh of the Haram es Sherif: "Is the water now good or no?" He answered: "It is good; if you doubt, bring me a bottle and I will drink it."

MORALS OF THE FELLAHÎN.

(*Answers to Questions.*)

By P. J. Baldensperger, Esq.

The following answers must be taken as a general description of the fellahîn, of whom it cannot be affirmed that any are either "good" or "bad," but the character of the greater number is indicated.

1. *What sort of reputation have the people which you are describing?*

Answer. It is very different; thus, the Bethlehemites may be divided into three classes: the Moslem Fawaghré, فواغرد, the Greek Christians, and the Latin Christians. As the name of the Moslems indicates, they came from Beit-fâghûr, a village above the Wady el Biâr, now in ruins, فاغور. Towards the end of the last century they took possession of a part of Bethlehem. They are darker than the Latin Christians, who themselves are descended from European Christians who came here as pilgrims and merchants, many probably being of Venetian origin, as their Italian-sounding names still denote. Most of the Christians of the Greek Church closely resemble the Moslems. They are the original Christians of Bethlehem, or have flocked to this centre in the course of centuries.

It is asked: *Are they brave, generous, truthful, and honest, or are they the reverse—thieves, liars, cowards—or are some good, some bad?* The Fawaghré may be called brave and even generous to some extent, whilst the Christians are cowards, and, being of a mercenary turn of mind, rather stingy, as compared with others around them; for whilst the fellahîn in general treat guests with much honour and hospitality, this custom is rapidly dying away among the aristocratic Christians.

Truthfulness, honesty, or the contrary, are very relative qualities. These people would not call themselves liars for putting facts in a way to serve their own ends, nor do they consider a man dishonest who does not steal anything of considerable value. The word thief حرامى, *ḥarami*, or خاين, *khaïn*, is only used for burglars or robbers. Also there are different ways of viewing some things which are allowed. Thus, a man may take grapes from a vineyard in the daytime, but if he take them by night he is called a thief and punished as such. Of course there is a good deal of common sense in this, for the first man only means to eat grapes, whilst the nocturnal visitor steals. The Fawaghré were formerly burglars, but have of late years taken to work, generally carrying loads between Jerusalem and Jaffa, or from the stone quarries to Jerusalem. The Beit Jala Christians, who were almost all originally of the Greek Church, are generally considered braver and

more generous than Bethlehem Christians, and they are also less given to mercantile pursuits. Bethlehem Christians have been travelling the world over for the last 25 years, whilst Beit Jala Christians are stone-carriers or lime-burners, and the habit of being out day and night influences the character to a great extent. The less the fellahîn frequent the towns the braver they may be considered, but honesty is not one of the virtues they can boast of. Highway robbery is less practised now than it used to be, but some villages seem to have a predilection for burglary—those situated near towns being often tempted to this—whilst those near the great roads leading from one town to another incline to highway robbery. Kŭryet el 'Enab, commonly known as Abu Ghôsh, has had its notoriety as a robber village, and the inhabitants still retain some of the impudence of their immediate ancestors. Lifta as well as Mâlhah were of the burgling order. Urtâs and el Khŭdr, small and out of the way, may be classed as peaceful and, to a great extent, honest. Deir Eyûb, دير ايوب, not far from Bab el Wad, are notorious robbers and thieves to this day. Perhaps this has been brought about by their situation, which enables them to survey the road from Jaffa to Jerusalem without themselves being seen, whilst the inhabitants of Beit Mahsîr, بيت محسير, also not very far from the road, but without the same facility for surveillance, are more retired, brave, peaceful, and industrious. In years gone by when their powerful neighbours of Kŭryet Abu Ghôsh used to make raids upon them, they would submit without murmuring. Very much depends on the origin of the different villagers, religion always having had some part in it. Abu Ghôsh and Emmaus, near Latrôn, are of the same origin, most likely of Circassian descent, whence their arrogance. Surafend el Kharâb, سرفند الخراب, 4 kilometres west of Ramleh, has a very wicked population taken all in all, differing greatly from their next neighbours of Kubeibeh, كبيبه, of Egyptian origin, who, although of no very good reputation, still are more peaceable than the Sarafaud people. Then again, almost all villagers along the Jerusalem road are petty thieves, and have more immoral vices than those living further away, also they are less generous in consequence of their continual contact with strangers of all classes and nations. The word *brave*, translated by the fellahîn into *man*, رجال, is developed into several meanings; thus, a *man* gives to eat to any stranger passing by, as well as being brave in fighting. Again, manliness, مراجل, may be shown by taking away property forcibly from other villagers, or from those living in the same village, usually as a punishment; this is called robbing, نهب, in their legal way, and is restricted to some villages. The further off from the seat of Government the hardier and bolder they are to execute their own laws. Going to accuse in towns shows decadence of their independence.

Again, goat-stealing is counted as manliness. This is practised in the mountains, and very often done as vengeance—the stealing party either hides in advance between the rocks where the flock is expected to pass, or takes the goats out of the folds. This prey is mostly killed at once and roasted and eaten, either by the thieves only or by the whole families. Generally they prepare an oven, زرب, made for the purpose, by loose stones piled on each other, leaving a hollow large enough to introduce the goat or lamb; when the stones are sufficiently heated, the meat is put in whole and covered with the heated stones for an hour or so. Afterwards the meat is quite tender, and is eaten with the more appetite if the enemy is greater.

In fighting against each other, either with stones or arms, they may be called bold; they seldom hide behind rocks or walls, although they are cowards.

They have vices, though different from those of the townspeople, inherited from time immemorial—as Moses told the Children of Israel in Leviticus xviii, 23–27, to keep themselves from such abominations.

2. *How are women punished when they are unchaste, either before or after marriage?*

Answer. Women are punished by death when the consequence of their unchastity can really be proved, be it before or after marriage. The way the punishment is fulfilled is generally brought about by the coaxing of the nearest-of-kin; the father, or brother, or cousin entices the accused to go to some out-of-the-way place, where they pretend business, or in harvest time an excuse can readily be found; the victim also very often is aware of what is going to happen. Any mode of killing is adopted. I have known cases of being cut to pieces, others strangled, others shot, or simply cutting the head off. It is considered a great dishonour for the family to leave the adulteress unpunished. Honour is saved when the deed is done, and as a sign that vengeance has been taken, some blood ought to be smeared on the turban of the executioner when entering the village; the neighbours then cease their blame.

Near large towns they are less strict, partly from personal degradation and liberal views, and partly from the impossibility of escaping the Turkish law.

Several cases in Urtâs were punished, one by strangulation in a cave several miles away, another was shot by her brother-in-law. Her husband was in the army, and, as he never came back, the case was never reported. In the first case, a girl was killed by her brother and cousin; here, too, nobody had anything to say, and the case was covered. A woman of Surafend left her village and dishonoured herself and family by giving herself away in the streets of Jerusalem. Her brother went there, treated her very kindly, and succeeded in making her go home on a visit, where she was treated with much love during a month. One day when he was out ploughing, he asked her to bring him his dinner, which she

unhesitatingly did. They sat down to eat, and having done so, he asked her to go to the sand-hills of Rûbîn in search of wood. He followed her there, and when he approached her with his axe, she fell on her knees begging for life, but he said: "Thou whore, thou hast stained our honour, we can only wash it clean with thy blood." He hacked one arm away, and then the other, she all the time begging him to spare her life. Then he unrolled her hair, and dragging her with fury, cut off her head, smeared some of her blood on his turban, and buried the mutilated corpse. When he came home, rumour of his behaviour was soon spread, and his enemies tried to let the Government officials know, but he left the village, and is said to have been seen in the Hauran. But the family stain was removed.

Formerly, when the Government power did not extend very far beyond the walls of Jerusalem, they killed them openly. In Beit Sâhûr many years ago a woman was discovered having been on forbidden ground; the elders of the village and the family council took the woman down to Bab-el-Masié, باب الماصة, and sat down in a large circle, the woman in the middle: they now voted as to what should be her punishment, and all except one man said death. She was then and there cut to pieces by the whole assembly, the one man having narrowly escaped to share her lot, though he was innocent, and only from compassion wanted to save her. Thus, examples may be found here and there, but certainly they become more rare as we near the towns.

3. *Are men punished for adultery as well as women?*

Answer. Yes, if there are sufficient proofs, but this being very difficult, they mostly escape the punishment. Where the relatives of the abused woman think they have ample proof of the adulterer, they will kill him clandestinely, in fact a good many murders originate thus: but a man has always to be avenged, there is no end to the vengeance. The following is an example: A Faghuri went north stealing. In the Nâblus district it is customary for strangers to beg their bread at the ovens. The burglar sat down in the street to await some occasion. Presently a well-dressed woman came out with a wooden dish, باطيه, *batié*, containing dough and pigeons, which she was taking to the oven, طبون, *tabûney*. He now slipped into the house and hid in the wheat-storer (خابيه), with the intention of stealing what he could when the inmates were asleep. After a while the woman came back with the roasted pigeons and fresh bread, put them on a tray of straw, طبق, and covered them. She then put on her wedding clothes, perfumed herself, painted her eyes, and let in a male friend. They had their supper, when suddenly a knock at the door announced her husband, who had been away to buy corn, and had returned unexpectedly, with two loads of wheat. In haste, the woman put her lover into the wheat-storer, and opened with *ahlan wa sahlan*,

أهلن وسهلن Welcome to my husband. Of course, the wheat had now to be stored away- the thief and the lover sitting side by side as quiet as possible. When the wheat came pouring in, the thief jumped up, and called the attention of the house-owner to the different events of the evening. They now brought both lovers and laid them face to face on each other, and in this position cut both heads off with one stroke of a sword. Both corpses were thrown into the well in the courtyard, and the thief in the self-same hour left the house and village, and was never again seen in that neighbourhood. A Dervish, an unmarried man, under pretence of frantic fits of holiness, had, in his nightly runs over the mountains of Urtas, a secret *rencontre* with a maiden. When the secret was divulged, the Dervish secretly left Urtâs (*see Quarterly Statement*, January, 1894, pp. 34–35), for the next-of-kin would have killed him, in spite of his holiness. The woman was strangled. It is only the apparent consequence of adultery which is thus punished; for it would be next to impossible to punish at least fellahîn—legally, a man or a married woman, as the consequences can always be shifted; the law for denouncing being so minute. Thus, a man found shut up in one room with a woman, or even in her bed, cannot be judged as guilty, as long as the act itself has not been seen. There may be very strong suspicion, but the husband dare not act lightly. A man of Beit Dejan was telling me one day, in the presence of two fellahîn from Emmaus and Beit Mahsîr, how he had watched his wife, whom he suspected of having a lover. One day he feigned leaving the village, but by a round-about way came back and hid in the vicinity, when his doubts were soon confirmed by the entrance into the house of his wife's lover. He called immediately several men of the village, and they surrounded the house, and called to the woman to open the door, which, after some hesitation, she did. She had hidden the lover, but a close inspection of the premises soon brought him to light, when the husband only sent both away, immediately announcing to his wife her divorce. At this, my two mountain fellah friends had their swords half drawn, as if to assist at such a capital moment, and could hardly await the announcement of the execution of the sinners in some brutal way. The blood of the two mountaineers had risen whilst the Dejanite coolly explained to them how he did not even beat either his wife or her lover; for, said he, they would have accused him in Jaffa, and he might have been punished; but thus he was divorced legally before the judge in Jaffa, having sufficient proofs. My mountaineers spat in the Dejanite's face—for such degradation of fellahîn they would, under the same circumstances, have cut both to pieces. (Burning, as proposed by Judah, Genesis xxxviii, 24, is unknown.)

4. *Are thieves punished by having their hands cut off?*

Not now; but in times past this must have been customary, and up to a very recent date. The Crimean War may be regarded as bringing

in a general change in the relations between fellahin and Government laws, of course, always in a progressive way, beginning with Jerusalem and its environs and Jaffa and its environs. All other towns and villages long retained a semi-independent life.

In the story of the Zir (about the year 600 A.D.), cutting off hands is mentioned. The Haj Mustapha Abu Ghôsh, who held the mountains of Judah under his supreme authority up to 1863, punished thieves for a first offence by cutting off a hand and a foot; old offenders were usually killed at once. At a later period they used only to beat them, but in such an unmerciful way that death would often be the consequence. In the plains, where waterwheels are used, a thief was sometimes bound to the chain, and carried round under the water several times. Many years ago, when having a talk with some fellah Sheikhs, I asked them whether they would object to French rule? Well, they said, it was all right, but they were afraid of the punishments being those of having hands cut off for thieves, and tongues cut out for liars. This is perhaps a tradition kept up from St. Louis, who used to do this out of his extreme piety.

5. *Explain how murder is punished, and what money is needed to condone it. Explain all you know about blood feuds.*

Answer. When murder has been committed, the malefactor and the kindred حامولة of the murderer leave the place, if it is a known fact, and cannot be denied. They generally go to some powerful neighbour or ally, and beg his assistance or protection دخالة *dakhalet*. They usually experience a friendly reception. An armistice عطوة of a certain number of days is called for, and the family of the person murdered try to arrange matters through the mediation of their protectors. If an agreement is come to, their law is Piast. 33,333, para. 33. But, as a rule, a girl is given in marriage to the deceased's family, or even 2 or 3, also several yoke of oxen, or a piece of land. A day for meeting is appointed, and they generally meet well armed, for, in case of an emergency, they may settle the dispute by a fight. They have a dinner together, differing in nothing from all other dinners—rice, and meat, or bread, in broth—they kiss each others' heads, and promise to live henceforth in peace. Though time may help them somewhat, the desire for vengeance is so strong amongst them, that it takes a good many years to really arrange matters. If they cannot agree, time is no question. They say a Bedawy had waited to take his revenge 40 years, when he met a relation of the murderer of his relative and killed him; but a quarter of an hour later he met the murderer himself and repented for having been too quick. Therefore they wait as long as possible, and try all they can to kill the murderer himself; unless the murderer is not worth killing, then a better man is chosen. In fact they always claim four men at least. In cases where money is not accepted, or the

conditions are too hard to fulfil, the vengeance, الثار *el thar*, continues through generations. Government interference of late years has hardly been able to put a stop to the feuds, though it has somewhat checked them, and interfering as far as the money-question goes has considerably weakened the opponents, who are frightened by the terrible expenses. In a case of murder, already alluded to on page 132, *Quarterly Statement*, April, 1894, where the whole village of Urtas agreed to kill Salem, the tyrant of the place—who together with a captain of Gendarmes in Jerusalem oppressed the people—they had agreed to lay in wait for him on different roads, and to bear the consequences together. Accordingly on the 17th November, 1875, he was killed on the way to Bethlehem; the murderer was known, but the family of the murdered man was too weak to do anything beyond denouncing the whole set of conspirators, who were imprisoned at Jerusalem for many years, but by means of money they got out again, and the man is still unavenged. The man left three boys, between one and five, who at the age of ten already began talking of the vengeance they had to take. On several occasions in my presence they, together with their nephew (at the time of the murder a man of 20), tried in the heat of dispute to take their vengeance, اسنّد ثارهم *istad tharhum*, but the bystanders were very careful to stop them. Amongst themselves, or in our presence, no secret was made about the hopes of taking their revenge. The offender would even come to me and tell me, if he had tried and not succeeded, either because his gun would not go off, or the victim had escaped narrowly by galloping as fast as possible. Two men especially expected to be murdered, and never went out of doors after dark, hardly through the village itself, for fear of meeting the ever-ready avenger.

In Beit Mahsîr a man killed his brother many years ago. Here the case was different; neither Government officials meddled, nor did any of the family stir, as they were all the next-of-kin. But the murderer left a wife and a son, who went to her home at Lubban, in the Nâblus district. When the boy was grown up his uncle, the murderer of his father, went to claim him, pretending a desire to have his nephew with him to bring him up and marry him. The fact was he was afraid the nephew might easier find occasion of taking his vengeance if absent from the village, but if he married his daughter to his nephew they would be brought into closer contact and there would be less danger. The boy, who is now grown up, promises still to kill his uncle some day. He is a very good-natured lad, but the *thâr* cannot be omitted.

If a man is killed undesignedly, the murderer is plundered of everything he possesses by the relations of the person killed, and is obliged to flee from the village to some powerful friend or neighbour, who thus replaces the City of Refuge of the Israelites. Negotiations may begin at once, but three men may be killed in his stead without the guilty party having any claim whatever. If a woman is killed the Mohammedan blood-money, *deyé Muhamadie*, دية محمدية is taken, but in rare

instances blood is taken instead. It is very rare for a woman to be killed, at least willingly.

If a woman be the murderer she is not punished; the murder, if possible, is put to the account of a man. It may happen that in a riot women help the men by throwing stones, and may kill a man. Several years ago, in Kŭryet el 'Enab, a man was killed by a woman who threw stones from the house-top. He begged, like Abimelech of old (Judges ix, 53) to die by the hand of a man, but, contrary to Israelite manners, this was not granted, and to this day if his enemies talk about him, it is said with contempt: "Cursed be his father, who was killed by a woman," ينعل ابوُ قتلتهُ مرآ (see also Judges ix, 54) *Yen'al Abu-katlatho mara.*

6. *Do you know cases in which men have been made to drink boiling water or oil to show their innocence after swearing it by Allah?*

Answer. No, but very often in Urtâs they used to threaten and even appoint days on which to go to the Bal'a, بلعة south of Gaza, where a Sheikh makes the swearers lick a red-hot iron, and the guilty alone has his tongue burnt. But as such proceedings are very disastrous for both parties, they always arranged matters at the last moment before starting.

7. *How do they swear? Do they place the hand on any stone or other object in swearing?*

Answer. The real efficacious form for swearing is somewhat as follows:—

واللهِ العظيم باللهِ الكريم ان يا ابن داود (و هلم جرا)

Wallahi il 'Azeem, billahi-il-Kareem, in ya ibn Daoud (&c., &c.).

By God the mighty, by God the bountiful, oh son of David.

They now say what the case may be. Instead of "son of David" they may say the prophet David himself, or the Saint before whose tomb they swear. This is generally done with great solemnity and danger, as the parties meet on an appointed day, at the Saint's tomb, mutually agreed upon, all well armed, to swear their innocence either of a theft or adultery; for murder they do not swear.

On one occasion a man had taken a mare from another one for a ride. In consequence of the ride the mare died: the owner claimed the price of the mare, and the borrower denied his liability. Consequently a day was appointed for the parties to meet in St. George's Church, which, though a Christian (Greek) Church, is still acknowledged by the Mohammedans as El-Khŭdr, الخضر. The borrower of the mare approached, and put his hand to the chain in the lunatic asylum and swore, as above, and by El-Khŭdr, that the mare never died in consequence of his ride. Both parties were so well armed that they only

walked home proudly without daring any attack on each other. Another man was accused of "attempt of adultery." The case had to be settled, after swearing innocence in the Church of the Nativity in Bethlehem. المهد *el mahd* (Christians swear by the son of Mary, Jesus, the son of God; whilst Mohammedans swear by 'Esa, the son of Miriam). The accused, although guilty, swore to the husband, and after having done so, struck his adversary, غريم *Ghareem*, with a naboot on the head, saying, "Are you now content; you have had my oath?"

Another form. If a man has been wounded by a firearm the person supposed to be guilty swears:

وَاللهِ العظيم باللهِ الكريم انى هل برودد ما همزت ولا غمزت ولا
انى من قومها ولا حضرة يومها ولو انها الي ما اعلم وين ادورها

By the great God, by the generous God (here touching the gun) *that this gun did neither impel* (*me*) *nor wink* (*to me*), *neither am I from its tribe, nor was I present in its day* (*i.e.*, the day of its crime), *and even though it be mine, I know not where to look for it* (*i.e.*, I am ignorant of its doings).

On some occasions they use stratagems: A man had to swear for a misdeed of which he was guilty, and, being of an honest turn of mind, he went into the house, lay on the cradle and was rocked by his mother, then with a light heart he went to swear, as above, and saying, "Since I was rocked in the cradle I never committed such a crime, nor have seen, nor beheld such."

There is another more powerful form, of which we ourselves were once the victim. . . . . A "best man" from the village was brought to swear at the window of the Prophet David at Neby Daûd, Jerusalem, that we were in the wrong, whilst three other men behind him held each other by the girdle, the first swearer holding the iron bar of the window, the others forming a chain behind him and only swearing that what the first one said was absolutely true.

On another occasion two parties had to settle the limits of their lands. They were not sure about them, so they sat down and agreed to swear by St. George, but to spare them all the trouble of going there and putting on feast clothes, they made a square with their fingers on the ground, the swearer saying, "Oh men! this square represents St. George's abode, he is over against us, but can be present just as well, so I'll swear here"; and, putting his hand on the square, swore, and it was accepted by both parties, namely, that the boundary of his lands passed in such and such a place.

8. *Can the Sheikh order a man to be put to death, or can the Elders of the tribe do so? If so, how is he killed?*

Answer. Not now. In days gone by when the Sheikhs of Kŭryet el 'Enab, of the Abu Ghôsh family, or of Beit-'Atâb of the Sahamy family,

or of Beit Jibrîn of the 'Azizy family, were all powerful; these chieftains would simply order a man to be killed, and their orders were immediately executed. But, as already stated, the Crimean war is to be considered the end of the fellahîn power in Palestine, though some far off villages south of Hebron still retain partial independence. About the year 1858, when the present inhabitants of Emmaus, east of Latrôn, still lived in Kŭryet (for they are relatives, and are distinguished as fellahîn and *'hadar*, or townspeople, حضر), a man named Shahwân, شهوان, fell in love with a married woman and did all in his power to marry her by inducing her husband to divorce her. When entreaties and threatenings were without effect he tried to kill the man. One night when the husband was asleep at Dilb, the fountain below Kŭryet el 'Enâb, Shahwân shot him with a pistol right in the breast; the man, mortally wounded, still had strength enough to call out "Shahwân shot me!" this being heard by some neighbours. Shahwân ran home and hid the pistol, but it was generally known that he was the murderer, and without any trial the Haj Mustapha ordered him to be brought and slaughtered immediately, the relatives of the murderer having to fulfil the order. When the uncle of the murderer put the sword to his neck he fainted, but three other men standing by took the sword, and with one blow cut off his head on the manure hill. The Haj Mustapha gave orders to have him buried without ablution, with his blood and bloody garments, and had him carried away outside of the village, that his carcass should not "defile the village," لا ينجس البلد so without prayer they buried him in a corner of the cemetery. But secretly by night his relatives poured several jars of water over his grave, to have him cleansed, and thus enable him when his time comes to enter into Paradise.

9. *Are they strict about their women? Are there many illegitimate children?*

Answer. Yes, on account of their jealousy, and very often not without cause. They all try to keep them as strict as possible: they have no confidence in their women, not in the most virtuous. Some villages are more openly given to debauchery. The less they communicate with strangers, as, for instance, outlying villages of the Hebron district, the less the scandal. However chaste a fellah wants to have the reputation of his own village, this being also a guarantee for himself, he is careless and even impudent about the reputation of another. Some villagers still consider themselves as *'hadar;* townspeople, as Bîr M'aîn of Emeer descent, or Kŭryet el 'Enab of Abu Ghôsh memory. Their women at least half veil their faces on the approach of strangers, which fellah women do not. I know of no illegitimate children at all, at least none living in the villages, in consequence of the strictness about unchastity. On some rare occasions married women have had children,

whom the father or husband would not acknowledge, but for want of sufficient proof simply rejected the child. I knew a blind man in Jaffa who had been sent away by his father, of Beit Mahsîr, when he was already grown up. The father, on careful calculations many years afterwards, had come to the conclusion that this could not be his son, and so rejected him. Again, another curious case, a married woman had a boy by another man, but the husband acknowledged the boy; not so the natural father, who, however, after the death of the wife, claimed "his son," as the woman could no more be punished. The fellahîn want as many sons as they can have—for every son is capable of praising God—and the more حمد لله (hamd-lillahs) the better for the father's well-being in Paradise. The above case is the only one I heard of. I do not know of any unmarried woman's child living in a village.

A girl belonging to a village in the plain was with child, which would be punished by death in any other villages. Her father inquired about the father, and tried to have him marry his daughter, but he would not acknowledge the child before its birth. The girl then came to Jaffa, and put the case before the Kadi, who took her into his house, and she was confined of a boy there, who is called ابن الدولة, *Ibn el doleh*, Son of the Government, and the girl was paid 3 Majeedis a month to bring it up. A new order of Roman Catholic sisters came to Jerusalem several years ago, going round the villages to gather maiden-mothers expecting their children; they act as midwives, and bring the children up in the orphanage at Jerusalem in the Roman Catholic faith. Their field of labour is mostly among the Christian fellahîn. The women of villages which lie near to towns, employ means for procuring abortion.

Another way of escaping punishment is also common. If the man who misled a girl consents, which is often the case, the pair go to another part of the country, beyond Jordan, amongst the Bedawîn, or to the Hauran, where they act as though they were always married, and generally find employment as farmers or servants. This going away is called "a snatching away," خطيفة. They never come back, though for decency's sake, the family feign to minutely search for the fugitives. Years may go by before anything is known, and the girl's relatives are the more easily consoled, as a bloody act is spared to them.

In two villages in this district public houses are even found. An old woman receives into her house runaway girls from other places, and secretly lets the young men know. Though the people of these villages call this a new custom, and impute it to Government protection of women, I am inclined to find in it a very old institution. These villages may be classed with Sodom and Gomorrah: and also in Genesis xxxviii, we find Judah going to a harlot, who in those days was veiled as a particular sign, and afterwards sending her a kid as pay, openly. Thus it is very likely that the villages in the neighbourhood always had such institutions. The villages of the plain all along the way to Gaza have no

very good reputation. A great deal may be owing to an admixture of more or less Egyptian blood. Mountaineers have in all countries a better reputation than the inhabitants of the plain.

A JOURNEY TO PETRA—1896.

By Gray Hill, Esq.

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Dismounting we passed into the narrow gorge on foot, gazing with delighted wonder at the purple red cliffs, which rose sheer up on each side, and often overhung our heads, and failed but a little of meeting 200 or 300 feet above us. But the brilliant blue sky and glorious sunlight peeped in here and there and lit up the dark chasm. Oleanders grew along the stream bed, although many, we were told, had been cut down to make a passage in the summer of 1895, and fig and other trees flourished in clefts. In this winding cavern-passage every footfall reverberates. There was but little water at this time in the bed of the stream, it having been diverted above to irrigate the corn lands of Eljy. We missed the arch across the passage so often mentioned by previous travellers, and were told that last summer it fell down. A sudden turn brought us in sight of the celebrated Kusneh, rose-coloured in the splendid sunshine, which, owing to the abrupt turn to the right of the gorge, fell full upon it and made of it the most perfectly beautiful thing we think we ever saw. Having looked long upon this we again plunged into the chasm, and after a little while wondrous Petra opened to our view. We pitched our camp in the centre of the main valley, under the rock-cut theatre. "Murray's Guide Book" of 1868 recommends placing tents above the theatre, and no doubt a finer view could be had from there, but I could not see any place where it would be practicable to put up tents, or any way by which the baggage mules would get up to that position. We established our kitchen in a cave near at hand. The next day, however, we changed the place of the camp to just under the large rock-cut tomb or temple known as the Corinthian Tomb, a spot which we found more convenient for visiting those parts of Petra which are at a distance from the Sik.

The chief monuments of Petra have been so fully described that I will say nothing about them here. We were much struck with the great extent of the place, the number of side valleys, the upper stories of excavations tier above tier in the cliff sides, the rock-cut stairs and paths leading to places not visible from the valley, and the very great number of caves cut out of the soft sandstone which had, no doubt, formerly been used as dwelling places. We had Wâdy Mûsa to ourselves. The presence of the soldiers seemed to keep the Bedawîn and the fellahîn of Eljy at a distance. Sometimes we noticed dark figures watching us from the hills, but no one

mounted us, or, indeed, with the exception of an old man who sold us a kid and asked for an extra bakshish to the medjidie for the love of Neby Harun, none approached us. The weather was very favourable, with a perfectly clear sky and a fresh delightful breeze, although at times under the cliffs and in the valleys it was very hot. We were, therefore, able to get about a great deal, and to see not only the principal monuments which are well known, but also many of which we have never seen pictures or read descriptions. Unfortunately, one of our cameras, with which we

(*From a photograph by Gray Hill.*)

TOMB AT PETRA.

took many photographs, turned out badly, and so we have not been able to reproduce some of the most interesting views. But it will be easy now for a skilled photographer to exercise his craft throughout this most wonderful place, and I hope soon to hear of this being done.

The appearance of the place as we saw it, without inhabitants, is most strange. From the Sik the valley opens out, narrowly at first, then wider. High precipitous cliffs rise on each side, and in them tombs and temples and caves are cut. Up the clefts in these rocky sides run many a flight of steps leading to other rock-cut recesses, ornamented with façades, and

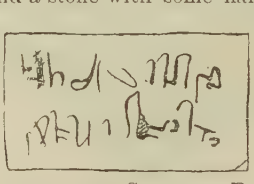
cisterns hewn out of the rock. The colour of the cliffs is reddish-purple, and there are often veins in it like those in watered silk. It is the strangest place one can imagine—strange and fantastic more than beautiful.

> "Match we such marvel save in Eastern clime,
> A rose-red city half as old as time."

I cannot help thinking that the recesses in the rocks, both natural and artificial, were used as much for the living as the dead, and no doubt the bottom of the valley was once covered with houses built of light material, which formed the habitations of the vast majority of the population. Of these nothing, however, remains. The only real building now existing in Petra is a large one called the Kusr Faraon, which was probably the Government House. Its walls are in good preservation, and some wooden beams built into them still look sound. Perhaps they are made of a very hard wood which grows near the stream, and of which I have had a stick made.

The valley which opens out to south-west beyond the Serai Pharaon, and which has been mentioned by previous travellers as unexplored, contains a stream flowing out from Petra, and the cliffs are crowded with caves on both sides.

In a tomb in the east cliff of the main valley just at the point where it first widens out, after debouching from the Sik, and about 100 feet below the bottom, I found a stone with some half-obliterated writing on



Inscription on Stone at Petra.

it. This tomb has a very high façade, plain, but with pilasters at the corners and cornices. Within, opposite the door, and on each side are rock-cut recesses opening out of the main hall. The floor of one recess opposite the door had very recently been opened, and 28 inches of concrete (which was, however, not very hard) had been broken through. The stone had evidently been found below this, and had been taken out and thrown aside, and the tomb below it had been partly cleared out. The writing was on the underside of the stone—a piece of red sandstone—and, I suppose, gave the name of the person buried below. The side containing the writing had, no doubt, been turned downwards when the stone was *in situ*, or the concrete above the stone would have destroyed it, the stone itself being soft. The tombs in the other recesses which had not been disturbed will probably be found to contain similar stones with writing.

The loneliness of this valley, once crowded with human life, the desolation of these great monuments of human vanity, weigh heavy

upon the soil. But our mother earth, calmly disdainful of the traces left by feverish man, who here lived but his hour and departed, has long ago resumed her solitary empire. She spreads her glorious mantle

(From a photograph by Gray Hill.)

Petra, S.W. Valley.

of tall grasses of brightest emerald, and of wild flowers many-coloured as the coat which Joseph bore, above the soil in which man laughed and wept through the happiness and misery of the days of his pilgrimage, and the folds of her glistening garment reach even to the verge of the

tombs in which he laid the noblest of his dead. The words of Job ring in one's ears: "He cometh forth like a flower and is cut down; he fleeth also as a shadow and continueth not."

After three days spent in Petra we returned to Ma'an, and awaited the arrival of the Haj.

From the Sheikh of Shimmia we heard much of the Valley of Hismeh, which he says begins one and a half days' journey south-west of Ma'an, and extends for four days' journey, and he talked of inscriptions there. The place is mentioned by Doughty, but he does not seem to have thoroughly explored it. The Sheikh spoke of it as containing a gorge much deeper than that of Petra. He declined, however, to take us there, on the ground that there were then at that place 90 tents of Bedawîn who were still against the Government.

One of our soldiers told us that in 1895, the son of the Wali of Damascus visited Petra with an escort of 150 cavalry, of whom our informant was one, but owing to the threatening attitude of the tribes they withdrew after 24 hours, and that afterwards, in the summer of the same year, there had been a battle near Shobek, between the Turkish troops and the Bedawîn, which lasted for two days, and ended in the total defeat and submission of the latter, after many of them had been killed. According to his account the soldiers were 550 men and the Bedawîn 40,000 (?); the troops had a cannon with them which dropped shells amongst the Bedawîn horsemen; but that what really caused their defeat was the music of the military band, which frightened the horses of the tribes and rendered them quite unmanageable.

At Ma'an was an Arab who spoke French, and who was frequently at our tents. He said he remembered Doughty well, and went with him to Shobek and other places near to Ma'an. He told us also that he was travelling in 1884 with a Frenchman, named Hubert, in the country between Medinah and Mecca, when the Bedawîn killed him; also that a German, whose name he did not know, went with them as far as Medain Sâlih, but parted from them there to go straight to the sea. One of our soldiers said that it was not the Bedawîn, but the French-speaking Arab who killed M. Hubert, and that the event happened almost six years ago. This, however, might be quite untrue, and there is no knowing the truth of any statement made in this country. I remember, however, about six years ago, meeting a German or Austrian gentleman on the Khedivial steamer from Jaffa to Port Said, who told me that he had been for long with the Bedawîn, and that his companion had been killed by them while he escaped.

Sheikh Khalîl spoke much of the fine climate of Ma'an and Shimmia, the pure air, and the absence of insects and of illness amongst the inhabitants. Asked why more gardens are not made, as water is to be found everywhere for the digging, he said that until the Government established itself here, there was always war between the two villages of Ma'an and Shimmia, and that what one planted the other destroyed, but that now order was established more gardens would be made. The Kaimakâm was,

indeed, then making a new garden at Shimmia, and planting it with trees.[1]

We went with Sheikh Khalîl to visit the large ruined reservoir, aqueduct, and village about 1 mile east of Ma'an, called Hammam. The aqueduct comes from Bûsta, and stretches to the east, over the desert as far as one can see it. Khalîl had many stories to tell of the administration of justice by Ibn Raschid at Hayel, his fame extending to all these borderlands. The Sheikh told us he had 150 guests at his house that evening, the Bedawîn coming in from the country round to buy and sell with the merchants of the Haj. Our friend of last year, Sheikh Fawwaz, of the Beni Sakhr, came in in advance of the Haj, and paid us a visit. His tribe have the right to conduct the pilgrimage from Muzeyrib to Ma'an. He helped us to buy a fine female dromedary from some men of the Beni Attijeh for the equivalent of £5—a very cheap purchase as we thought. Fawwaz said Bedawîn, although of hostile tribes, met at the Haj without quarrel.

Many sheep were brought in by Bedawîn for sale. With the price they would buy arms and clothing from the merchants. The sheep were selling for 1½ mejidie each. We bought a cock and four hens at Ma'an for 2 francs, and the hens laid eggs for us all the rest of the journey.

A Bedawy from near Shobek came to the Kaimakâm of Ma'an to say that he had just shot a man who many years ago had killed his uncle, and that now one life on each side having been sacrificed, he wanted a paper from the Kaimakâm to say that there should henceforth be peace between the families of the slain. He evidently thought that his shot ought to be the last in the blood feud. "You are a very clever man," said the Kaimakâm. "Take him to the Guest Chamber" (the prison).

The Kadi came to call, and discoursed pleasantly and with much politeness. We knew his brother at Jerusalem. He lamented his exile at Ma'an, and wanted to return to his home at beautiful Kuds. He put this case to me which was puzzling him:—A is robbed of his mare. The robber sells her to B. While she is in B's hands three offspring are begot and born from her. The original owner claims the mare, and the three offspring. The Kadi was prepared to award the mare to the claimant, but was in doubt about the offspring.

We went to see Khalîl's garden, and my wife was closely examined by his mother-wives and daughters, who had donned all their jewels of silver in honour of the occasion, and said they had never seen a white woman before. The entrance to the garden was through a hole in the wall, so low that one had to crawl through. Within we found a plantation of young figs and pomegranates well irrigated and flourishing mightily, and under one of the trees a carpet was spread and we were made welcome. Then Khalîl led us through the streets of Ma'an.

[1] As to the former state of lawlessness and internecine strife at Ma'an, *see* Doughty, vol. i, p. 34.

Everyone was very inquisitive, and some looked at us with the regards proper to be bestowed upon Christian dogs, as was natural enough in this remote place, but no one was openly rude. Khalîl says that in the winter it is very cold here, and there is much snow. Olives, lemons, and oranges will not grow, but pomegranates and figs flourish. The mud walls of Ma'an and Shimmia took beautiful tints in the evening light, and the sky over them was of a deep blue dissolving into pink and yellow, and then bright pale pure blue. A crescent moon, a thin curved line of exquisite brilliant light, and strong enough to cast a clear shadow, crowned all.

On April 18th the Haj arrived, being two days late. We rode out a little way to the north of Ma'an to see it come up, and set up a small tent to shelter us from the sun on a slope above the road. We first tried to get admission to the roof of one of the houses near the Gate of Ma'an, but the owner evidently did not want us, and refused to let any one but my wife inside the house, because of his womankind, so we did not persist. From the little tent we saw everything very well. The procession first appeared on the summit of the elevation to the north, from which we had originally seen Ma'an ; then passing down a small valley disappeared from sight for a few minutes, and wound up again to the plain below us. The first to arrive were several hundred camels bearing provisions and tents for Pasha and merchants. The latter were soon set up so as to form a short street. As the camels unloaded they wandered off to look for scrub to eat, turning backwards on their way for this purpose to a small valley at hand, so that there was a constant passing and repassing of camels laden and unladen. Then came more camels—these gaily caparisoned, bearing covered howdahs in which women were sitting. Of these coverings some were very gorgeous, and there were palanquins borne between two camels, one forward, the other behind. Then came 200 or 300 cavalry, the Pasha in European dress except for the fez, on an European saddle, and with tan leather gloves and a white umbrella. The sacred green banner was beside him. Then came the general body of pilgrims, a very picturesque set, on camels and carrying guns. Apart from the rest were the Adjem, or Persians, who settled down in a group by themselves. They had a young Prince with them. Then came the warlike-looking Ageyl, on splendid Bactrean dromedaries, and well armed. It took about three hours for all to arrive. About 300 tents of various colours and shapes were set up, and I estimated the total *personnel* at between 2,000 and 3,000.

The Bedawîn and townsfolk crowded in to buy and sell. Two of our men bought strong sheep-skin coats in Ma'an for 2 mejidie each. The negro slave of Sheikh Raschid, of Abu Dis, near Jerusalem, was one of the pilgrims of the Haj. He knew us, and soon found us out. He told us that he had come on foot, with his gun and 3 napoleons and 2 mejidie for travelling expenses, all his savings ; that his money fell from him unawares on the march, and that he had sold his gun, which had cost him 12 mejidie, for 2, in order to buy food. We advised him

to go back with us, and promised to feed him, and give him a mount when we could, but he, saying he should never have another chance of reaching Mecca, refused, and we gave him some money to help him on his way. There were said to be 500 Persians with the Haj. Our soldiers would not let us walk about the Haj camp for fear of molestation, but with our field glasses we could see everything that went on, even in the more distant parts of it.

The next day we rode past the tents of the Haj on our way to Shobek. A young man who had shod some of our horses at Ma'an followed us, and asked to be allowed to join us. He had, he said, come from Damascus as assistant to a blacksmith, and with the promise of good pay and a donkey to ride; but had received nothing, and had been obliged to walk all the way, so we took him with us to Jerusalem. We soon entered upon undulating ground, with scrub and then grass and wild barley. A ride of three hours brought us to the ruined town called by Doughty "Utherah." The walls on the north and west sides are very clearly seen. They have projecting towers, some square, others half round, and contain many large well-cut stones placed without cement. There are ruins of many buildings within the walls, and a large Khan at the lower end of the town, which appears to have been built of old materials, but is itself in ruins. An Arabic inscription stands over the doorway. Below this Khan is a stream of clear water issuing from the hillside and falling into a pool a little lower down at the bottom of the valley. Forty minutes further towards Shobek we noticed rough remains of a wall or buildings on the top of a hill close at hand to the east, and a copious spring of water in the valley. We passed by the place where, according to our soldier, the battle with the Bedawîn took place in the summer of 1895, and soon after mounting an eminence we saw Shobek (Mons Regalis) before us, placed like Kerák upon a hill with deep valleys all round—a natural stronghold. As we approached we came upon caves and dwellers in them. We pitched our camp somewhat above the bottom of the valley south of Shobek, in full view of it, and sent our letter up the hill to the commander of the little garrison (25 men), who soon came down for talk and coffee.

The officer told us that the people of Shobek were from 500 to 600 in number, and, like the Keráki, spend the greater part of the year outside the town tending their flocks and cultivating the ground. He said that four years ago, before Shobek was occupied by the Government, the place was besieged by other tribes who had a quarrel with the people of Shobek, and that, being unable to get into the place, for the crusaders' walls still stand up strong and high all round the little town, and the hill is very steep on every side, they surrounded it, thinking that want of water would soon compel the inhabitants to yield. But the Shobek women brought skins of water up the 372 steps which lead down the great well in the centre of the town to the level of the bed of the stream in the valley below, emptied them over the walls in the sight of the besiegers, and contemptuously asked if they wanted any more, whereupon the siege was broken up.

The officer said he had been all over the Turkish Empire, and nowhere are air, climate, and water better than here. There is plenty of water and much good land all round, and this must once have been a prosperous country, and have supported a considerable population. He said only one of the people of Shobek could read or write—an old soldier of Mohemet Ali. The town inside is like Kerâk, a heap of broken-down houses and manure heaps. The water springs forth strong and clear from the hillside in the valley below, north of the town. The weather was cold early and late, but very hot during the main part of the day. Shobek stands about 4,000 feet above the Mediterranean.

On leaving this place we took a route somewhat to the east of the compass course for Tafileh in order to avoid a rough valley, and soon struck on an old Roman road paved with basalt. Noting a building on a hill about 1 mile south of this, I rode to it, and found ruins of what I supposed to be an early Christian church, and a fort with remains of a rampart enclosing both, perhaps a place of refuge built by the Crusaders subordinate to Shobek, but the style of the church seemed Byzantine. My photographs of these buildings failed. The place is about 3 miles east of Shobek. Three and a half hours' riding brought us to a pleasant spring amongst some rocks, and three and a half more to the ruins of Gharundel, which stand in a valley on an eminence above a brook—a confused mass of fallen stones, with a few rough columns and parts of a good wall alone standing upright. Soon afterwards we got a view of the Ghor, then of the south end of the Dead Sea, seen through a great gorge. All this country consists of rolling hills, with much scrub, wild barley, and grass, and many springs of water, and is capable of good cultivation. We kept along a Roman road leading north for many miles. As we neared Tafileh, sheep and goats became numerous. We followed the side of a mighty gorge, saw to our left great chasms of purple-red cliffs like those of Petra, breaking down to the Dead Sea, crossed over more hills with their slopes gloriously green with corn, and little hedges on the summit of one, and then beheld Tafileh (Tophil) standing on a hill on the other side of a lovely, fertile, well-cultivated valley, well planted with olives, figs, and corn, and an open space looking like an English village green, where soldiers were exercising. From here we had a splendid view down a deep valley running to the Dead Sea, and reached our camping-place tired out with the long ride.

At Tafileh we were very politely received by the Kaimakâm, a very pleasant gentleman from Beyrout, who speaks English pretty well, and is an amateur photographer. There was nothing but the beauty of the landscape to detain us here, and we were anxious to get home, so we started off the next morning from this lovely place, expecting to get down to the Ghor es Safieh in about the same time as it takes to journey from Kerâk to the shores of the Dead Sea—four or five hours. We were actually 13 hours on the way.

Leaving Tafileh, we wound down amongst olive groves and rich crops of corn, by the side of a stream which was the author of all the fertility,

and thought we should proceed swiftly and in one continuous descent to the Ghor through the valley which we had seen from above the town. But we soon began to ascend again—then down, then up once more, passing through masses of splendid wild flowers and many patches of tall barley, and two villages of the Tafileh district, winding down into and up out of the upper parts of gorge after gorge which descended to the Dead Sea, but so steeply as to be quite impassable.

We had lunch on a slope crowded with the tall yellow marguerite daisies and many other wild flowers, from which we had a view of the waters of the sapphire-tinted Dead Sea. Towards three in the afternoon we got into deep ravines of red sandstone, in colour like the rock of Petra, even with the same flowered silk appearance in parts, and worn into wild caves and pinnacles, and strange fantastic shapes. The mules and guide were in front, and we had often to follow the scratchings of the hoofs of the former over the rocks as the only indications of a path. Still, we were now descending fast, and hoped that we should soon reach the Ghor. We got to the bottom of a deep narrow valley, in which the blood-red reflection of the sun's light falling on one side lit up the shadows of the other side until we all looked like Duncan's grooms smeared with our own gore—a most strange sight. But here we came on a great wall of the same kind of rock 500 feet high, the path being so narrow and steep that it was with the utmost difficulty that the mules were got up it. In more than one part the loads had to be taken off their backs, and carried up by the men. It was 5 p.m. before the real unbroken descent began, and at 6.15, when the sun set, we were still clambering down a giddy goat's path, winding zigzag amongst a waste of craggy heights, between broken rocks and loose stones. Fortunately we had a moon to light us, but it was past eight when we got to the bottom, and were led by the croaking of frogs to the welcome water and scrub of the Ghor es Safieh, ghostly in the moonlight. During the last part of the descent we were able to mount our horses, and they slid down steep sand slopes with us on their backs. We had emptied our water bottles early in the day, thinking the journey would be short, and had all suffered a good deal from thirst in the heat of the afternoon and evening, for it is a waterless country.

Arrived at the stream which flows down the Ghor es Safieh, after a hearty drink we made a fire of brushwood, and fired off guns to guide the muleteers, some of whom did not arrive until the night was far advanced. Later we had to move higher up the stream to a spot at which the main part of the camp had arrived. A guide, whom we had brought from Tafileh, started off to return thither at midnight, fearing the Ghawarneh, with whom he said his people had a blood feud.

We were told that the Tafilehites, previous to the establishment of a Kaimakâm and garrison, had always succeeded in preserving their independence of other tribes, and had taken part with the Beni Sakhr against the Kerâki in the fighting of a few years ago; also that they had no horses, but fought on foot, being good marksmen. One would

suppose that cavalry would not be of much use in most of their country owing to its very hilly and rocky character.

We stayed a day here to give all a needed rest, and the next day, guided by the old Ghawarineh Sheikh, who had worried us in 1890 and was now all smiles and repentance, passed through the thorn bushes and patches of corn, and the ooze and slime which lie in certain parts of the hollows and about the bed of the stream falling into the Dead Sea near its south-east corner, and are dangerous without local knowledge, and reached the wide open plain of the Ghor. There is no pleasanter journey than that across it on a spring morning at the point where we were. The blue mountains of Judæa in front, the grand rugged ravines of red Edom behind, the opalescent waters of the Dead Sea to the north, the clear azure sky above, and the wide sands below one's feet, make an enchanting scene. There are several broad streams to pass, the fording of which creates a pleasant little excitement, with reluctant mules and splashing horses, and the exhilarating air causes one to be most unreasonably and unaccountably happy. I was riding the dromedary through one of these streams when she stuck fast, and, trembling with fear in the unaccustomed element, seemed as if she were about to abandon herself to the stream in despair of getting through it, but one of the soldiers promptly rode up alongside, and I slipped off her back to a seat on his horse behind him, and so escaped a ducking.

Reaching the west side of the Dead Sea, we passed at the back of Jebel Usdum by the strange ravine amongst the chalk hills which I described in my last account, and got down in the broad glare of the hot noon to the west shore of the lake. Here my wife noticed two salamanders hurrying to their burrows in the sand. Mounting to Zuweirah el Tahta we rested while all the thirsty animals drank at the cistern, and filing up the pass, under a blazing sun, without a breath of wind, at last reached the top, and pursued our route through the dried-up and desolate hill country of the Jehalin tribe, not meeting a human being or seeing a sign of life until dusk, when we fell upon a goat track, which following, we reached long after dark a cistern in a valley known to our Ghawarineh guide; a spot which is generally a gathering-place for the flocks of Abu Dahook, the Jehalin Sheikh, but which was then fortunately entirely at our service, neither man nor beast being near it.

From this place we journeyed to Hebron, and from Hebron to Jerusalem, over twice-trodden ground, and on the evening of April 25th we sat once more upon the terrace of our house on Scopus, looking peacefully down upon the noble Sanctuary and the Holy City, brilliant in the light of the full moon, happy in the thought that we had at last achieved what we had so long and so earnestly desired to accomplish, and our "lips filled with ejoicing."

REMARKS ON MASONRY.

By Lieut.-Colonel C. R. Conder, LL.D., R.E.

Mr. Dickie's valuable paper on "Stone Dressing," in the January *Statement*, 1897, agrees with the conclusions which I have published in my paper on Masonry in the "Memoirs." It is still popularly supposed that drafted masonry indicates Hebrew or Phœnician work, whereas all the evidence points to this finish being of Greek origin, and unknown in Syria before the second century, B.C. The descriptions of masonry in the "Memoirs," at such places as 'Arâk el Emîr, Deir el Kul'ah, 'Athlît, and many other sites, will be found to substantiate this view. The drafted masonry was used by Jews, Greeks, Romans, Byzantines, Arabs, and Crusaders, from 176 B.C. down to quite recent times. It is only known in Phœnician buildings which present Greek architecture, and is not found in the ancient part of the aqueduct at Tyre.

Although the dressing of the stones may be a feeble indication of the period to which certain masonry is to be ascribed, the general character of masonry is more distinctive. The following styles may be easily recognised, by aid of examples dated or otherwise fixed :—

Jewish Masonry.—The leading example is the Palace of Hyrcanus at 'Arâk el Emîr, built in 176 B.C. Here the drafted stones are of great size, and well cut. They are laid without mortar. The drafts are well finished, and the face of the stone within the draft is flat. The dressing is not the same found in the Herodian masonry of the Temple.

Herodian Masonry.—Similar to the preceding, also of great size, and built without mortar. The peculiar dressing of the drafts, and of a border round the projecting part of the stone, is as yet known only at Hebron, and in the walls of the Jerusalem Haram, and on the Tyropœon Bridge. Even the older masonry of "David's Tower"—as far as my memory goes—does not present this peculiarity. The masonry at Herodium is well cut, the stones being very square. There are no drafts, and the general effect is that of good Roman work.

Roman Masonry.—That of the second and third centuries A.D., at Baalbek, Gerasa, and other places, is similar to the preceding, but never shows the peculiar dressing of the Herodian. At Baalbek, Greek letters occur as mason's marks on the stones. The size of the ashlar is very great, and the finish remarkably fine.

Byzantine Masonry.—This, as found in the remains of chapels, and monasteries, with late Greek texts, and Greek crosses, covers the period from the fourth to the seventh centuries A.D. It is very inferior to any of the preceding. The joints are wide, and the stones are laid in lime mortar which has now perished. In one wall will be found both drafted and undrafted stones. The drafts are irregular, and the "bosses" are sometimes rustic and very generally of irregular shape. The horizontal beds

are sometimes interrupted, giving the impression that the walls have been patched at various periods, but in some cases it is clear that this was a feature of one original structure. Round arches and barrel vaults, domes, and debased classic details accompany this masonry. The stones are generally long, but the size of the masonry is much less than in preceding periods. Drafted stones are chiefly employed on the exterior of buildings —as in other styles.

Arab Masonry.—This often resembles the preceding, but drafted stones are less used, and generally smaller than in Byzantine buildings.

Crusaders' Masonry.—This is larger and much better cut than the Arab work. The diagonal dressing is peculiar to the Norman work, though only a certain proportion of the stones are so dressed, these occurring on the interiors of castle and church walls. The bosses of the drafted stones on exteriors are generally rustic, with a considerable projection. The occurrence of Norman masons' marks—only found in Syria in the twelfth and thirteenth centuries—is the safest indication of Crusaders' work. These, however, only occur on the best specimens of undrafted masonry in the interiors. They are usually near the middle of the stone. The mortar, mixed with pounded pottery and small shells, is extremely hard, and the work as a whole is well cut and finished.

It is to be noted that no masonry found during the recent excavations presents us with walls like those of the Herodian age, except perhaps at the south-west corner of the upper city. The masonry and mortar described on the east is all of that character which has been called above Byzantine. Between 450 A.D. and 614 A.D. there is plenty of time to allow of several periods of building under Eudoxia, Justinian, and others. Some of the remains may, however, be earlier, and belong to Hadrian's Jerusalem. I think we may conclude that the old wall of Jerusalem, existing in 70 A.D., has not yet been discovered on the east near Siloam. It did not include the Pool of Siloam, according to Josephus, since that pool was accessible to the Romans during the siege. In 333 A.D. the wall on Sion excluded the Cœnaculum, and probably represented Hadrian's line. This also was the line in 1099 A.D., since Raymond of Toulouse encamped on Sion during Godfrey's siege. Eudoxia's wall was perhaps destroyed by Chosroes in 614 A.D., or by the Turks in 1072 A.D. The walls were rebuilt by the Egyptians some months before the Crusaders arrived. In the later part of the twelfth, or in the thirteenth century the wall was extended on the south-west to enclose the Cœnaculum, and ran back north, east of this church. This was perhaps the line of the walls destroyed by David of Kerak in the thirteenth century.

Dr. Bliss has, I think, recovered the line of this later wall, and indications of Crusaders' work were found in 1874 at the Protestant Cemetery scarp on the south-west of Sion.

It does not appear probable that the ancient wall will be recovered by excavation close to Siloam. The great staircase seems to be clearly of the Byzantine age, though it may occupy the position of older rock-cut steps,

which were cut at a different angle in connection with the scarp. As the levels are not given on the published plans and sections, it is at present impossible to understand what may have been the connection with the paved street (said to be Roman) further north. The masonry at AL, south-west of the Pool of Siloam, I saw when it was uncovered in 1881. It appeared to me to be too slight for a city wall, and to have belonged to some Byzantine building. Dr. Bliss does not attribute this, or the block of masonry further north, to the ancient city walls.

It is possible that the older walls were entirely demolished in 70 A.D., and their materials reused. They have disappeared on the north-west of Jerusalem, and some of the stones have there been reused to form the wall of a pool. But if the ancient rampart does exist on the south-east, as on Ophel and near the south-west part of the upper city, it will not, in my opinion, be found by continuing excavations close to the Pool of Siloam, but must be sought further north, or traced eastwards from the remains of ancient walls, in continuation of the south-west scarp, which remains Dr. Bliss has discovered.

In the absence of inscriptions, coins, seals, or well dated pottery, this appears to be all we can at present learn from the explorations on the south side of Jerusalem.

WEYMOUTH, *January 28th*.

NOTES FROM DAMASCUS.

By Dr. ERNEST W. GURNEY MASTERMAN.

The Well Sādreyeh.—If on coming to the *Bab el Berîd* of the great Mosque of the 'Omayyades in Damascus one turns sharp to the left, instead of entering the mosque, one enters a narrow lane. This lane is bounded on the right hand side by the ancient western wall of the mosque. Following it, it is found to lead to a doorway, inside of which is a small courtyard. Almost the whole of this courtyard is filled by a large tank (or *Baḥrah*) about 12 feet square. Rising from almost the centre of the tank to a height of about 5 feet is the mouth of a well surmounted by a windlass. This well mouth is connected with the west side of the Baḥrah by a kind of solid stone bridge. This well is called the بئر الصادرية (Well Sādreyeh), and connected with it is the following curious custom. If anyone here receives a severe fright, and he or his friends think he is going to be ill as a consequence—fright being a very commonly supposed cause of many illnesses—he or his friends go to this well and throw in *salt*. The usual method appears to be to put some salt into each corner of the *Baḥrah* in turn, but if the case is very serious, and especially if death is feared, the friends in addition to the salt, put in barley, henna, and eggs. I have heard most about this custom

from the Jews, to whom it is well known, but they assure me that all classes of the community frequent this well in this way—the Moslems going especially on Friday, the Jews on Saturday, and the Christians on Sunday. Regarding the last, I cannot think the custom can be common, as many I have asked have never heard of it.

The iron grating of a window of a building on one side of the court—apparently a Wely—is covered with bits of rag, such as one sees as registers of vows made at various sacred trees, tombs, etc., in many parts of the country.

It is curious in connection with this to note that, if the Jews here are very anxious about anyone, they dissolve salt in water and throw it about the room. While I have been doing an operation the friends of the patient have done this in the adjoining room. It reminds one of the "libation" of heathen times.

Superstitious Custom Connected with the Building Up of a Door.—Amongst many customs with which the East has made me familiar, I have here come upon one which is quite new to me. I found it in this way: When passing along a narrow lane in the Jewish quarter, I noticed on several occasions a square stone, about 6 inches by 6 inches, with a round hole of about an inch in diameter, set in the midst of the wall about 4 feet above the ground. At length one day my curiosity was sufficiently aroused to make me thrust my walking stick into the hole, and to my astonishment I found it went in its whole length. Looking down the hole I found I was looking straight into a room. On looking, I found in the same lane (a narrow passage between high houses) a similar hole, but this time loosely stopped with some bits of rag, and less conspicuous because the stones around were covered with plaster. Since this I have seen many such places, chiefly in the Jewish quarter, but also among the Moslems. On enquiry I find there is a superstition (the more enlightened say "among the women"), that it is very unlucky to completely close up a door—death or some misfortune will follow, and as in the re-arrangement of houses here, doors are very frequently built up, a hole through the whole thickness of the wall is left. I need hardly say that this custom is not universal, but it is common enough to show that there is a deep-seated and probably ancient superstition. I can offer no explanation of the custom, but it seems to me it might (if it is really an ancient custom) possibly explain an obscure passage. In Ezekiel viii, 7–8, we read: "And when I looked, behold a hole in the wall. Then said he unto me, Son of man, dig now in the wall; and when I had digged in the wall, behold a door." The hole was apparently only a small one, because the Prophet had to dig before he could enter, so it could not be as a substitute for a door. According to the above custom the hole would be merely the sign that the door there had been walled up.

Among other unlucky things, I find it is considered very unpropitious for a woman to draw water or borrow a *ma'oun* (a vessel for washing linen in) in one house and carry it to another after dark.

Damascus, *February* 1*st*, 1897.

THE WATER OF JACOB'S WELL.

I.—By Rev. H. Clay Trumbull, D.D.

In connection with the valuable notes on the supposed medicinal properties of the water of Jacob's Well, as given by Dr. Henry Bailey, and approved by Dr. George Adam Smith, it may be worth while to ask if there is any reason for supposing that the woman of Samaria, mentioned in John (iv, 5–30), came there to draw water for her home or household. It is commonly understood that this was the case, and many a scholar has attempted to account for it; but is it not more probable that her presence there is to be accounted for in another way?

When I came to that spot I had the popular view, but as I looked about me and saw that the well was on the edge of a great grain field in which men were at work, I saw that it was natural to suppose that a woman drawing water at that well was doing it for the supply of the workers in the field. Then as I read the Gospel narrative, on the spot, I was surprised to find that this explanation better accorded with the text than the popular idea, and that nothing there said involved the fact that she wanted the water for her own use.

The well was dug by Jacob for the supply of his own field, so that he need not depend on wells near the towns of other people. The plain is still called the Plain of Mukhnâ, or the Plain of the Cornfields. Workers in that plain still need water, and women now, as formerly, furnish their supply. The Samaritan woman apparently came up to the well from a remote part of the great grain field, and would have gone back there but for her interview with Jesus. Becoming so interested in His words, she wanted to go first to her home, before returning to the workmen with the water. In evidence of this it is said she "left her waterpot (there by the well in the fields) and went away into the city." Is not this a natural explanation of the occurrence?

If the water was in itself preferable to that of springs near her home, as Dr. Bailey suggests, that did not make it any less suitable for those near it in the fields for which it was provided. Why should we suppose that she came to the well for her home supply of water, since there is no mention of such a fact in the Bible narrative?

Philadelphia, U.S.A., *February* 10*th*, 1897.

II.—By Dr. Ernest W. Gurney Masterman.

In the *Quarterly Statement* for January, Dr. Bailey, late of Nâblus, suggests that the reason the Samaritan Woman went some considerable distance to obtain water from the well traditionally called Jacob's, was because of the *essential* goodness of the water. In confirmation

of this he remarks that there is a local tradition of the goodness of the water to-day in Nâblus. I venture to suggest, however, that it is rather the sacred tradition than the peculiarity of the water which explains all this.

In the first place it is quite true people in this country frequently send considerable distances for water, but as far as I know it is invariably to get spring-water. Thus in Jerusalem they send to 'Ain Karim and other such springs, and here to 'Ain Lenabeyeh, &c. If spring-water cannot be obtained, running water is, according to the uninstructed native mind, to be preferred to cistern or well-water—"Living" water as contrasted with stagnant or still water.

Secondly, I think it is very improbable that in reality the water in "Jacob's Well" is in any degree less hard than that in the numerous springs round Nâblus. It must percolate through similar layers of limestone. I know from experience that people coming to Nâblus from Jerusalem, Jaffa, Gaza, &c., where well-water is drunk, do suffer from the change, just as many of the people here do when they go to some parts of the Lebanon, but I much doubt if the natives suffer at all who always drink it.

The supply of water in the well evidently does not depend upon a perennial spring, because even now when the well is cleared of rubbish there is no water in it in the autumn. In September, 1895, when I was there, the well was cleared, but it was quite dry.

Thirdly, sacred wells are common in these lands, and, whatever the real character of the water, all kind of excellencies are ascribed to it. If for example you enter the Great Mosque here you will almost at once be presented with a bowl of water from the "Well of the Prophet" in the mosque precincts. This water, which seems to us to be of a very ordinary quality, is praised extravagantly, and somewhat similar virtues are ascribed to it as to the well near Nâblus. That the essential quality of the water is not so important as the associations is shown by the admiration felt by all the Moslems for the waters of the Zemzem Well at Mecca. A favourite good wish here is اللّٰه يسقيك من بئر زمزم *i.e.*, "May God let you drink from the Well Zemzem." And yet this water has been scientifically examined and proved to be full of decaying organic matter, and swarming with bacteria!

That the well was not the usual resort of the women is perhaps shown in the Scripture narrative by the fact that the Samaritan woman was alone there, and that our Lord was left alone talking to her so long. The noisy crowd of women gathered round the source of the water supply for the village pretty nearly all day in the spring months, affords a great contrast to this picture. And then we notice how very conscious the woman was of the sacred character of the well. Is it not reasonable to suppose that it was just because her "father Jacob gave us this well" that she came to draw?

The greater difficulty which Professor George Adam Smith points out

in his book ("Hist. Geo. of the Holy Land") is why was so deep a well ever made in the neighbourhood of so many springs? Might not the following be a simple explanation?

The springs have probably always belonged to the townsfolk (since they became settled), and in the case of any wandering tribes with considerable flocks among them it is exceedingly probable that the more settled inhabitants would first resent and then resist the new comers marching twice daily into their midst to water their flocks at their springs. Probably any experienced Nomad with such flocks, accustomed to such a country as this, would know pretty surely when he might, from the conformation of the hills, expect to find water. If then a quarrel arose, what more probable than that he should seek to make himself independent of these disagreeable neighbours. Further, if we can accept the tradition, we have in the story of Jacob two special facts connected with this, firstly, he bought a piece of ground on which he could make a well for himself, and then we gather from Genesis xxxiv that his family made themselves sufficiently obnoxious to the Shechemites to make it very necessary for Jacob to be independent of their permission to use their springs.

Damascus, *January* 30*th*, 1897.

FLORA OF SYRIA, PALESTINE, AND SINAI.

By Rev. Canon Tristram.

"Flora of Syria, Palestine, and Sinai: from the Taurus to Ras Muhammad, and from the Mediterranean Sea to the Syrian Desert." By Rev. G. E. Post, M.A., M.D., D.D., Syrian Protestant College, Beirût, Syria.

It is strange that in the flood of botanical literature which has poured from the Press for the last half-century there has not, so far as we are aware, been any attempt to provide a convenient and portable botanical handbook for any region of the world since the publication of Mr. Joseph Woods's "Tourists' Flora," in 1850. Floras there have been innumerable, of every region of the world, but none for the knapsack. Sumptuous quartos, and long serials with elaborate illustrations, are rarely accessible to the student, and are useless to the traveller. At length Dr. Post has enabled the traveller, and even the tourist with an eye for nature's jewellery, to carry with him a key amply sufficient to open every botanical mystery he may meet with on Syrian shores, mountains, or deserts. His work is more than merely a tourist's Flora for Syria and Sinai. In a thick but portable post 8vo volume, which may be carried in saddlebag or knapsack, he has filled 920 pages of small yet clear type, with the terse yet exhaustive and intelligible diagnosis of no less than 126 orders, 850 genera, and about 3,500 species of phænogams and acrogens. The lower forms of cryptogams he does not touch. His work adds over 1,000 species to those hitherto registered as indigenous to

the region of which he treats. Not only so, the volume is illustrated by 443 woodcuts, illustrative chiefly of the fructification of the plants treated of. The diagnosis of every class, family, and genus is given in its proper place, briefly, concisely, and intelligibly. Would that we had possessed such a handbook 30 years ago. Many an error and mistaken identification in my "Fauna and Flora of Palestine" might then have been avoided. Not unfrequently, in turning over the leaves of Dr. Post's manual, I came across the remark: "Stated by Tristram to be found at A"—and more than once I have found that it was a case of mistaken identity with some closely allied species, or a new species since described by Dr. Post, but undetected by me.

The region of which this work treats is one of no ordinary importance, not merely historically; but unique on the face of the globe, for the wonderful diversity of its Floras, unrivalled in any other district of the same limited extent. It is the meeting point of three continents, and its Flora exhibits the special characteristics of all three. It impinges on the great Taurid range on the north, is washed by the Mediterranean Sea on the west, and melts into the Syrian and Arabian deserts on the east and south. Its perpendicular range is from 10,220 feet above the sea level at Jebel Sunnin, to the Jordan depression 1,300 feet below the sea. The parallel mountain ranges between which that depression is furrowed—the Lebanon and the Anti-Lebanon and their prolongations northward and southward—present many contrasts in their respective Floras, as Dr. Post explains. We may quote his own words:—

"The very large number of species found in a country so limited is to be accounted for by its microcosmic character. Within an area of 50,000 square miles is found a strip of sea-coast sharing the climatic conditions of the Mediterranean littoral. The western range of hills and mountains, receiving the air from the sea, saturated with moisture, precipitates it in a rainfall of about 36 inches on the coast, and perhaps 50 on the upper zones of Lebanon. These mountains are channelled into deep valleys, some with a general east and west tread, and others north and south, each having a different exposure, an arrangement eminently favourable to the growth of a great variety of species. The air, from which so much moisture has been precipitated, passes over to the parallel chains, which abstract from it a large part of its remaining moisture. The rainfall of the second range is probably not much more than half that of the first, while that of the eastern plateau is much less, probably not more than from 10 to 12 inches. As a natural result of this physical conformation, the Flora of the maritime watershed of the coast range differs considerably from that of the inland range, which again differs strikingly from that of the eastern plateau. The deep chasm of the Jordan and the Dead Sea, with its tropical climate, adds to the variety and numbers of species. The deserts, although useless for agriculture, have a large and most interesting Flora, differing almost totally from that of all the other regions."

Our author takes Gaiou Dagh (Amanus), opening just east of Scanderoon, as the northern limit of his region. The Flora of this district, though generally resembling that of Taurus, as might have been expected, yet contains many peculiar species. Lebanon, and the Nusairy chain which links it with Amanus, may again be looked on as a distinct district. Though the Arctic plants, which might have been expected here close to the snow-line, are wanting, the warm period which succeeded the glacial epoch having

exterminated them, yet their place has been taken by a vast number of peculiar forms: in fact, we have a highly specialised local Flora. In the lower ground of central Western Palestine we find the Germanic Flora such as prevails in Greece and the coasts of Asia Minor, while from Beersheba southward it becomes rapidly assimilated to the desert Flora of Egypt and Arabia. But very different is the Flora of the eastern desert, east of Aleppo, which contains many peculiar species, and which, when properly worked, Dr. Post expects will produce many botanical novelties. He points to the poverty of the Anti-Lebanon in comparison with the Lebanon, as doubtless to be explained by the comparative want of moisture. The species are fewer, and there are not many distinctive plants. Much richer are the hills of Gilead and Moab, and most markedly different in their Flora from the hills of Western Palestine. But no botanical feature of the region can surpass in interest that of the Jordan and Dead Sea chasm, abounding in species identical with those of India, Arabia, and Ethiopia, either, as Dr. Post suggests, immigrants; or, as seems to us more probable, survivals, buried in this sheltered nook, from the warm period which succeeded the glacial epoch. In 1863–64 we collected, I think, about 120 such species, making it, in fact, a tropical outlier.

We can only again repeat our thanks for the invaluable aid Dr. Post has afforded, not only to the traveller in the land, but to every student of botanical distribution. The work consists of over 900 pages of small clear type, printed on thin strong paper, and produced, not with all the resources of metropolitan typography, but on the spot, at the Mission Press of the American Protestant Mission at Beirût, not the least remarkable feature being the admirable woodcuts drawn by the author, and engraved under his eye.

THE SWASTICA.

By Rev. Theodore F. Wright, Ph.D.

In a paper on "The Jerusalem Cross" (*Quarterly Statement*, 1894, p. 187) Herr Schick figured the Swastica 卐 but did not state the places in which he had found it. Professor Hayter Lewis, in a footnote on the same page, spoke of it as "an Eastern symbol of the sun, but used also in early times by Christians."

Commenting upon Herr Schick's paper, Colonel Conder (*Quarterly Statement*, 1894, p. 206) remarks that the Swastica "is found in the catacombs very early," but gives no reference.

In the same volume (*Quarterly Statement*, 1894, p. 300) I mentioned the fact that it is found in American mounds.

Commenting on this (*Quarterly Statement*, 1895, p. 84), Mr. William Simpson drew from his abundant information, since given forth at length in his admirable work on "The Prayer Wheel"; but in neither writing does he especially refer to Palestine.

We have now in America a very valuable book on the Swastica, by Mr. Thomas Wilson, of the United States National Museum, into which he has collected much information not before gathered together. He gives numerous illustrations showing the Swastica to be found in Japan, Corea, China, Thibet, India, Persia, Syria, Armenia, Ruins of Troy, Egypt, Algeria, Ashantee, Greece, Italy, Switzerland, Germany, Scandinavia, Scotland, and Ireland, in several of our States, among several of our Indian tribes, in Central America, and in South America. His map shows the Swastica encircling the globe.

Without entering into the theories of Messrs. Simpson and Wilson, I would add that another American archæologist promises a fuller treatment of the Swastica in our mounds, and has the means to do so. It is evident that no ancient symbol equals this in its vast extension, and that it is far more ancient than the Christian Cross. What I venture to ask is that we may be told of any instances in which it appears in Palestine, in relation either to Christian or pre-Christian times, so that, when archæologists of all sorts are bringing forward their facts, we may not be left with vague statements. Will Dr. Schick—as all Biblical students will now take pleasure in calling him—and Colonel Conder kindly communicate their knowledge through the *Quarterly Statement*, and there are, doubtless, others who may give valuable aid at this point?

CAMBRIDGE, MASS.

CONSTRUCTION OF THE TABERNACLE.

By WILLIAM BROWN, Esq., author of "The Tabernacle and its Services."

IN July *Quarterly Statement* (1896) the Rev. H. Proby, M.A., with reference to article on the Construction of the Tabernacle, by Brryman Ridges, Esq., in April *Quarterly*, says: "I have come to the conclusion that, on the whole, Mr. James Fergusson's theory, as stated in Smith's 'Dictionary of the Bible,' is sound. That theory, however, does not agree with the text."

In order to find a ridge-pole Mr. Fergusson says: "Five rows of bars are quite unnecessary, besides being in opposition to the words of the text." The texts, however, in which the bars are noticed distinctly mention that there *were five*, and arranged in so many rows (Ex. xxvi, 26–28; xxxvi, 31–34); and further, that all these bars were for *the sides* of the Tabernacle, and not one of them for a ridge-pole.

Having metamorphosed a bar into a ridge-pole, Mr. Fergusson finds supports for it which are not mentioned in the text. "No pole," he says, "could be made stiff enough to bear its own weight and that of the curtains over an extent of 45 feet without internal supports." This ridge-pole is even much longer, for in the woodcut illustrating his pole

there are ten curtains, each 4 cubits (6 feet) depending from the pole, making it consequently 60 feet long. He supports his ridge-pole :--

(1) On the middle door pillar to the stature of which he (not the text) adds 5 cubits. (2) On the middle backboard, to the stature of which he also adds 5 cubits. Each of the 96 boards of the Tabernacle rested on a silver socket weighing a talent, a weight adapted to what it had to bear. But the socket for the middle backboard, according to Mr. Fergusson, has not only to bear the weight of an ordinary board, but that of one 5 cubits longer, and besides the third of the weight of the ridge-pole and the two sets of curtains. The socket could not be added to, as there was only one talent of silver provided for each (Ex. xxxviii, 27). (3) On a pillar of his own inventing, which he places 5 cubits behind the back wall. He says : "There must have been pillars beyond the back wall, because the Scriptures, in speaking of the back wall, always speaks in the plural, the two sides westward." But, according to the text, it is not a row of pillars and six west end boards that constitute the sides westward, but only the six west end boards themselves, whatever the meaning may be (Ex. xxvi, 22, 27). In the Revised Version the plural is not given.

The whole extent of the curtains, 40 cubits (60 feet), are used for the sides of Mr. Fergusson's sloping roof, not a single inch is over to enclose the large triangular spaces (of his Tabernacle) above the five pillars at the entrance and above the five pillars of his own creation at the west end.

Mr. Fergusson makes short work of the opinions of those who differ from him by saying that this or that arrangement "is in direct opposition to the words of Scripture." Is it not strange, then, that he should take such liberties with it himself as adding 5 cubits to the stature of a board and 5 to that of a pillar, and placing five pillars beyond the back wall, and transforming a bar into a ridge-pole, besides many other additions not mentioned in the text.

Mr. Proby goes even further wrong than Mr. Fergusson. He transforms the middle bar into a pillar, and places it between the third and fourth boards at the west end, for which there is no authority in the text. Disposing thus of the middle bar, he invents a ridge-cord, and in support of it says cords are mentioned in Ex. xxxix, 40, but in that passage and also in Ex. xxxv, 18, the purposes the cords were to serve are distinctly mentioned, and that of a ridge-cord *is not one of them.*

RESULTS OF METEOROLOGICAL OBSERVATIONS TAKEN AT JERUSALEM IN THE YEAR 1894.

By James Glaisher, F.R.S.

The numbers in column 1 of this table show the highest reading of the barometer in each month; of these the highest, as usual, are in the winter, and the lowest in the summer months; the maximum for the year was 27·607 inches, in October, and the next in order, 27·563 inches, in January. The highest reading in the preceding 33 years, viz., 1861 to 1893 inclusive, was 27·816 inches, in December, 1879.

In column 2 the lowest reading in each month is shown; the minimum for the year was 27·033 inches, in April, and the next in order, 27·060 inches, in February. The lowest in the preceding 33 years was 26·972 inches, both in April, 1863, and February, 1865.

The range of readings in the year was 0·574 inch. The largest range in the preceding 33 years was 0·742 inch, in 1876; and the smallest, 0·491 inch, in 1883.

The numbers in the 3rd column show the extreme range of readings in each month; the smallest was 0·175 inch, in September; and the next in order, 0·178 inch, in June; the largest was 0·507 inch, in March; and the next in order, 0·479 inch, in April. The mean monthly range for the year was 0·281 inch. The mean for the preceding 33 years was 0·309 inch.

The numbers in the 4th column show the mean monthly pressure of the atmosphere; the highest was 27·485 inches, in October, and the next in order, 27·416 inches, in December; the lowest was 27·264 inches, in July, and the next in order, 27·284 inches, in August. The mean yearly pressure was 27·357 inches. The highest mean yearly pressure in the preceding 33 years was 27·443 inches, in 1861, and the lowest, 27·358 inches, in 1892. The mean for the 33 years was 27·390 inches.

The temperature of the air reached 90° on May 23rd. In the preceding 12 years the earliest day in the year the temperature was 90° was March 25th in the year 1888. There were 3 other days in May when the temperature reached or exceeded 90°. In June it reached or exceeded 90° on 9 days; in July, on 9 days; in August, on 8 days; in September, on 4 days; and in October, on 2 days, the 9th and 10th. In the preceding 12 years the latest day in the year this temperature reached 90° was October 23rd in the year 1887. The temperature reached or exceeded 90° on 36 days during the year. In the year 1892 the number of days of this high temperature was 23, and in 1887 was 73; the average of the 12 years was 40. The highest temperature in the year was 108° on June 18th. The highest in the preceding 12 years, 1882 to 1893, was 106°, in July, 1888.

The temperature of the air was as low as 27° on both January 20th

MONTHLY METEORO

Deduced from observations taken at Jerusalem, by JOSEPH GAMEL, in a garden, well within t
Latitude, 31° 46′ 40″ N., Lo

Months.	Pressure of atmosphere in month—Corrected to 32° Fahrenheit.				Temperature of the air in month at 9 a.m.							Mean rea 9 a.	
	Highest.	Lowest.	Range.	Mean.	Highest.	Lowest.	Range.	Mean of all highest.	Mean of all lowest.	Mean daily range.	Mean.	Dry bulb.	Wet bulb.
1894.	in.	in.	in.	in.	°	°	°	°	°	°	°	°	°
January	27·563	27·268	0·295	27·336	57·0	27·0	30·0	50·5	34·1	16·4	42·3	46·4	43·
February	27·528	27·060	0·468	27·347	62·0	28·0	34·0	52·9	35·7	17·2	44·3	47·6	44·
March	27·578	27·071	0·507	27·342	78·5	31·0	47·5	61·2	40·1	21·1	50·6	54·2	48·
April	27·512	27·033	0·479	27·339	84·8	37·0	47·8	66·2	44·0	22·2	55·1	59·5	53·
May	27·435	27·223	0·212	27·362	95·5	40·5	55·0	79·9	53·4	26·5	66·7	73·8	65·
June	27·420	27·242	0·178	27·338	108·0	51·0	57·0	87·6	59·2	28·4	73·4	80·2	67·
July	27·378	27·173	0·205	27·264	104·8	51·0	53·8	87·4	60·1	27·3	73·7	81·2	67·
August	27·395	27·192	0·203	27·284	96·0	55·0	41·0	86·7	58·9	27·8	72·8	79·5	67·
September	27·472	27·297	0·175	27·371	95·0	51·0	44·0	85·1	56·8	28·3	71·0	77·9	66·
October	27·607	27·395	0·212	27·485	91·5	49·0	42·5	83·9	54·9	29·0	69·4	77·2	63·
November	27·499	27·303	0·196	27·398	81·0	38·0	43·0	64·1	44·1	20·0	54·1	59·6	54·
December	27·526	27·282	0·244	27·416	66·0	29·0	37·0	55·8	36·7	19·1	46·2	52·1	47·
Means	27·493	27·212	0·281	27·357	85·0	40·6	44·4	71·8	48·2	23·6	60·0	65·8	57
	1	2	3	4	5	6	7	8	9	10	11	12	1

(*To face p.* 156.)

LOGICAL TABLE

he city, about 2,500 feet above the level of the Mediterranean Sea, open on all sides.
ngitude, 35° 13′ 30″ E.

ding at m.	Vapour at 9 a.m.				Degree of humidity.	Weight of a cubic foot of air.	Wind. Relative proportions of.								Mean amount of cloud.	Rain.	
	Dew point.	Elastic force of vapour.	Weight in a cubic foot of air.	Additional weight required for saturation.			N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.		Number of days on which it fell.	Amount collected.
	°	in.	grs.	grs.	°	grs.											in.
0	39·2	·240	2·8	0·9	77	500	0	6	3	1	2	11	3	5	4·8	14	4·80
0	40·0	·247	2·8	0·9	75	489	1	3	2	1	0	4	8	9	6·8	14	6·54
2	42·3	·270	3·0	1·7	64	493	1	2	2	2	2	11	6	5	5·7	8	8·45
7	46·8	·342	3·9	1·8	68	487	1	4	2	2	2	11	4	4	5·6	6	1·94
	59·2	·506	5·5	3·6	61	473	1	7	2	2	0	3	2	14	3·1	1	0·07
	58·5	·490	5·3	5·8	48	468	4	6	0	2	0	0	1	17	0·6	0	0·00
4	58·1	·483	5·2	6·2	45	466	2	2	1	0	0	1	10	15	0·3	0	0·00
8	59·8	·514	5·5	5·3	51	467	2	1	0	0	0	1	6	21	0·8	0	0·00
4	58·4	·487	5·3	4·9	52	470	4	4	2	0	0	0	5	15	0·8	0	0·00
0	53·9	·416	4·4	5·6	45	473	3	2	10	0	0	0	4	12	0·5	0	0·00
8	50·5	·367	4·1	1·6	72	488	0	6	7	2	0	10	0	5	6·5	12	6·87
9	43·6	·284	3·3	1·1	73	496	0	3	4	3	1	10	4	6	4·4	10	6·71
5	50·9	·389	4·3	3·3	61	481	sum. 19	sum. 46	sum. 35	sum. 15	sum. 7	sum. 62	sum. 53	sum. 128	3·3$_{75}$	sum. 65	sum. 35·38
3	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30

and 21st, and on 7 other nights in this month was at or below 32°, and on one night only it exceeded 40°, viz., the 31st. In February it was at or below 32° on 5 nights, and as low or lower than 40° on 21 other nights; in March at or below 32° on 3 nights, and as low or lower than 40° on 16 other nights; in April it was as low or lower than 40° on 9 nights; in November, on 7 nights: and in December was at or below 32° on 7 nights, and as low or lower than 40° on 15 other nights. Thus the temperature was as low or lower than 40° on 113 nights during the year. In the year 1892 the number of nights of this low temperature was 19, and in 1886 was 97; the average of the 12 years was 54. The lowest temperature in the preceding 12 years was 26°·5, in January, 1890.

The highest temperature of the air in each month is shown in column 5; in January it was 57°·0, being 4°·0 below the mean of the 12 preceding high day temperatures. The high day temperature was above its average in May, June, July, October, and November, and below in all other months. The mean for the year was 85°·0, being 1°·0 above the average of 12 years. The highest in the year was 108°, in June.

The lowest temperature of the air in each month is shown in column 6; in January it was 27°·0, being 5°·0 below the average of 12 years; in February it was 28°·0, being 5°·7 below the average; and was below its average in all other months. The mean for the year was 40°·6, being 4°·1 below the average of 12 years.

The range of temperature in each month is shown in column 7; the numbers vary from 30°·0 in January to 57°·0 in June. In the months of May, June, and July the ranges were large, owing to the high high day temperature, and the low low night temperature, being 8°·4, 13°·5, and 14°·9 respectively larger than its average. The mean range for the year was 44°·4, being 5°·1 larger than the average of 12 years.

The range of temperature in the year was 81°·0. The largest in the preceding 12 years was 77°·0, in 1893, and the smallest, 63°·5, in 1885.

The mean of all the high day temperatures in each month is shown in column 8. The lowest was 50°·5 in January, being 0°·4 lower than the average. The highest was 87°·6, in June, being 2°·7 above the average, and the next in order 87°·4, in July. The mean for the year was 71°·8, being 0°·5 below the average of 12 years.

The mean of all the low night temperatures in each month is shown in column 9. The lowest was 34°·1, in January, being 4°·6 lower than the average. The highest was 60°·1, in July, being 4°·4 lower than the average. The mean for the year was 48°·2, or 4°·4 below the average of 12 years.

In column 10 the mean daily range of temperature in each month is shown; the smallest was 16°·4, in January, and the next in order, 17°·2, in February; the largest was 29°, in October, and the next in order 28°·4, in June. The mean for the year was 23°·6, being 4°·0 above the average. The smallest ranges in the preceding 12 years were 9°·3, in January, 1883, and 9°·7, in December, 1890; the largest were 33°·8,

in August, 1886, and 30°·1, in August, 1887. The smallest mean for the year was 17°·8 in 1883, and the largest, 24°·3, in 1886.

The mean temperature of the air, as found from the maximum and minimum temperatures only, is shown in each month in column 11 ; the lowest was 42°·3, in January ; and the next in order 44°·3, in February ; the highest was 73°·7, in July, and the next in order 73°·4, in June. The mean for the year was 60°·0, being 2°·5 below the average of 12 years. The lowest mean temperatures in the preceding 12 years were 39°·8, in January, 1890, and 42°·0, in December, 1886 ; the highest were 81°·2, in August, 1890, and 81°·1, in July, 1888. The highest mean for the year was 63°·7, in 1885, and the lowest, 60°·1, in 1886.

January was the coldest month of the year ; by reference to columns 5 and 6 it will be seen that the temperature was below its average both by day and night ; the nights were cold and below the average throughout the year, being particularly so in February, May, July, September, and December.

The numbers in column 12 are the mean readings of a dry-bulb thermometer. If those in column 12 be compared with those in column 11, it will be seen that those in column 12 are higher in every month, the difference of the means for the year being 5°·8. The mean difference between the mean temperature and that at 9 a.m. for the 12 years was 3°·2.

For a few days in the winter months the dry and wet-bulb thermometers read alike, or nearly so, but in the months from June to September the difference between the readings often exceeded 20°, and was as large as 24° on both July 15th and August 25th.

In column 13 the mean monthly readings of the wet-bulb are shown ; the smallest differences between these and those of the dry-bulb were 3°·4, in January, and 3°·6, in February ; the largest were 13°·8, in July, and 13°·7, in October. The mean for the year was 57°·5, and that of the dry was 65°·8 ; the mean difference was 8°·3.

The numbers in column 14 are the mean temperature of the dew-point, or that of the temperature at which the air would be saturated by the quantity of vapour mixed with it ; the smallest differences between these numbers and those in column 12, were 7°·2 in January, and 7°·6 in February ; and the largest were 23°·3 in October, and 23°·1 in July. The mean temperature of the dew-point for the year was 50°·9 ; the mean for the 12 years was 50°·0.

The numbers in column 15 show the elastic force of vapour, or the length of a column of mercury in inches corresponding to the pressure of the vapour ; the smallest was 0·240 inch, in January, and the largest, 0·514 inch, in August. The mean for the year was 0·389 inch ; the average of 12 years was 0·373 inch.

In column 16 the weight in grains of the water in a cubic foot of air is shown ; it was as small as 2·8 grains in both January and February, and as large as 5½ grains in both May and August. The mean for the year was 4·3 grains ; the average of 12 years was 4·1 grains.

In column 17 the additional quantity of water required to saturate a cubic foot of air is shown; it was less than one grain in both January and February, and more than 6 grains in July. The mean for the year was 3·3 grains; the average of 12 years was 3·4 grains.

The numbers in column 18 show the degree of humidity of the air, saturation being represented by 100; the largest numbers appear in January, February, November, and December; and the smallest from March to October; the smallest of all was 45 in both July and October. The mean for the year was 61; that of the 12 years was 59.

The numbers in column 19 show the weight in grains of a cubic foot of air, under its mean atmospheric pressure, temperature, and humidity. The largest number was in January, and from March decreased month by month to the smallest in July, then increasing to December. The mean for the year was 481 grains; that of the 12 years was 482 grains.

The most prevalent wind in January was S.W., and the least prevalent wind was N.; in February the most prevalent were W. and N.W., and the least prevalent was S.; in March the most prevalen was S.W., and the least was N.; in April the most prevalent was S.W., and the least prevalent was N.; in May the most prevalent was N.W., and the least was S.; in June the most prevalent was N.W., and the least were E., S., and S.W.; in July the most prevalent were W. and N.W., and the least were S.E. and S.; in August the most prevalent was N.W., and the least were E., S.E., and S.; in September the most prevalent was N.W., and the least were S.E., S., and S.W.; in October the most prevalent were N.W. and E., and the least were S.E., S., and S.W.; in November the most prevalent were S.W. and E., and the least were N., S., and W.; and in December the most prevalent wind was S.W., and the least prevalent wind was N. The most prevalent wind for the year was N.W., which occurred on 128 times, of which 21 were in August, 17 in June, and 15 in both July and September, and the least prevalent wind was S., which occurred on only 7 times during the year, of these 2 were in each of the months of January, March, and April, and one in December.

The total number of times of each wind are shown in the last line of columns 20 to 27; those winds less in number than the average of the preceding 12 years were—

N.	by	11
S.E.	„	12
S.	„	3
W.	„	14

and those winds greater in number than those of 12 years were—

N.E.	by	7
E.	„	5
S.W.	„	10
N.W.	„	18

The numbers in column 28 show the mean amount of cloud in each month; the month with the smallest amount was July, 0·3, and the largest February, 6·5. Of the cumulus or fine weather cloud there were 3 instances; of the nimbus or rain cloud there were 31 instances, of which 8 were in January, 7 in November, and 5 in both February and March, and only 1 instance from May to October; of the cirrus there were 16 instances; of the stratus 4 instances; of the cumulus stratus 46 instances; of the cirro cumulus 76 instances; of the cirro stratus 19 instances; and 170 instances of cloudless skies, of which 30 were in July, and 25 in both June and October, and only 2 in November.

The largest fall of rain for the month in the year was 8·45 inches, in March, of which 3·03 inches fell on the 30th, 2·19 inches on the 4th, and 1·60 inch on the 31st. The next largest fall for the month was 6·87 inches, in November, of which 1·82 inch fell on the 23rd, 1·70 inch on the 25th, and 1·05 inch on the 24th. No rain fell from May 6th till November 9th, making a period of 186 consecutive days without rain. The total fall of rain for the year was 35·38 inches, being 9·99 inches above the average for 33 years, viz., 1861 to 1893 inclusive. The number of days on which rain fell was 65, being 10 more than the average.

RESULTS OF METEOROLOGICAL OBSERVATIONS TAKEN AT TIBERIAS IN THE YEAR 1894.

By James Glaisher, F.R.S.

The numbers in column 1 of this table show the highest reading of the barometer in each month; the highest appear in the winter, and the lowest in the summer months; the maximum for the year was 31·073 inches, in January, and the next in order 30·932 inches, in February.

In column 2 the lowest reading in each month is shown; the minimum for the year was 30·157 inches, in April; and the next in order 30·251 inches, in July.

The range of readings in the year was 0·916 inch. The range in the morning observations was 0·813 inch, being 0·239 inch greater than the range at Jerusalem.

The numbers in the 3rd column show the extreme range of readings in each month; the smallest was 0·256 inch, in June, and the next in order 0·259 inch, in November; the largest was 0·704 inch, in April, and the next in order 0·628 inch, in March.

The numbers in columns 4 and 5 show the mean monthly reading of the barometer at 8 a.m. and 4 p.m.; and those in column 6 the lower reading at 4 p.m. than at 8 a.m.; the smallest difference between these two readings was 0·064 inch, in December, and the next in order 0·067 inch, in January; the largest was 0·133 inch, in October, and the next in order 0·100 inch, in September. In England in January the reading

MONTHLY METEOROL

Deduced from observations taken at Tiberias, by Mr. WISEMAN, at about 652 feet below the level
Latitude, 32° 48′ N.; Lon

Months.	Pressure of atmosphere in month—corrected to 32° Fahrenheit.							Temperature of the air in month.						
	Highest.	Lowest.	Range.	Mean at 8 a.m.	Mean at 4 p.m.	Lower reading at 4 p.m. than at 8 a.m.	Mean at 8 a.m. and 4 p.m.	Highest.	Lowest.	Range.	Mean of all highest.	Mean of all lowest.	Mean daily range.	Mean.
1894.	in.	in.	in.	in.	in.	in.	in.	°	°	°	°	°	°	°
January	31·073	30·503	0·570	30·823	30·756	0·067	30·789	74·0	39·0	35·0	63·8	46·5	17·3	55·2
February	30·932	30·414	0·518	30·715	30·647	0·068	30·681	75·0	39·0	36·0	66·1	47·8	18·3	57·0
March	30·922	30·294	0·628	30·672	30·597	0·075	30·635	83·0	44·0	39·0	71·4	50·8	20·6	61·1
April	30·861	30·157	0·704	30·641	30·572	0·069	30·606	96·0	48·0	48·0	78·6	54·7	23·9	66·7
May	30·758	30·368	0·390	30·618	30·528	0·090	30·573	106·0	53·0	53·0	90·4	61·9	28·5	76·1
June	30·594	30·338	0·256	30·529	30·435	0·094	30·482	112·0	65·0	47·0	99·7	68·9	30·8	84·3
July	30·590	30·251	0·339	30·420	30·337	0·083	30·378	111·0	68·0	43·0	101·1	72·7	28·4	86·9
August	30·568	30·265	0·303	30·441	30·367	0·074	30·404	111·0	67·0	44·0	100·5	72·6	27·9	86·6
September	30·653	30·346	0·307	30·551	30·451	0·100	30·501	103·0	50·0	53·0	96·6	69·2	27·4	82·9
October	30·818	30·449	0·369	30·676	30·543	0·133	30·610	102·0	63·0	39·0	93·0	67·3	25·7	80·1
November	30·789	30·530	0·259	30·672	30·602	0·070	30·637	94·0	53·0	41·0	76·8	59·7	17·1	68·3
December	30·898	30·498	0·400	30·747	30·683	0·064	30·715	80·0	46·0	34·0	68·9	51·9	17·0	60·4
Means	30·788	30·368	0·420	30·625	30·543	0·082	30·584	95·6	52·9	42·7	83·9	60·3	23·6	72·1
	1	2	3	4	5	6	7	8	9	10	11	12	13	14

(*To face p.* 160.)

GICAL TABLE

f the Mediterranean, and 30 feet above the level of the Sea of Galilee, open on all sides.
itude, 35° 34′ E.

8 a.m.								4 p.m.									Rain.	
Mean reading.			Vapour.			Degree of humidity.	Weight of a cubic foot of air.	Mean reading.			Vapour.			Degree of humidity.	Weight of a cubic foot of air.	Mean amount of Cloud.	Number of days on which it fell.	Amount collected.
Dry bulb.	Wet bulb.	Dew point.	Elastic force of vapour.	Weight in a cubic foot of air.	Additional weight required for saturation.			Dry bulb.	Wet bulb.	Dew point.	Elastic force of vapour.	Weight in a cubic foot of air.	Additional weight required for saturation.					
°	°	°	in.	grs.	grs.	°	grs.	°	°	°	in.	grs.	grs.	°	grs.			in.
51·1	49·7	45·4	·302	3·4	1·3	72	555	60·4	54·0	48·4	·340	3·8	2·1	64	547	5·6	14	3·90
56·9	52·3	48·1	·336	3·8	1·4	72	550	63·5	55·3	48·4	·340	3·7	2·8	58	542	4·9	8	1·39
61·5	56·4	52·0	·388	4·3	1·8	71	544	67·6	59·3	52·7	·399	4·4	3·1	59	536	3·9	11	3·85
66·4	61·6	57·8	·478	5·3	1·9	75	538	73·2	65·2	59·3	·506	5·5	3·4	62	530	3·5	9	1·48
74·4	68·2	63·7	·590	6·4	2·8	69	529	86·5	72·9	64·1	·599	6·3	7·1	48	516	1·4	1	0·13
81·4	72·3	66·2	·643	6·8	4·6	60	520	95·4	73·3	60·1	·515	5·4	12·0	31	506	0·7	0	0·00
85·9	75·6	68·9	·707	7·4	5·7	57	513	96·3	76·0	64·0	·597	6·2	11·7	34	503	0·7	0	0·00
84·8	77·2	72·2	·793	8·4	4·3	66	514	95·1	78·7	68·9	·706	7·3	10·0	42	504	0·7	0	0·00
82·7	76·3	72·1	·785	8·3	3·5	70	518	93·2	78·2	69·1	·710	7·4	8·9	45	507	1·7	0	0·00
81·0	70·3	63·1	·577	6·1	5·2	54	523	89·5	72·9	62·6	·563	5·9	8·7	40	514	0·3	0	0·00
68·6	63·2	59·1	·499	5·5	2·2	71	536	73·3	65·9	60·4	·528	5·7	3·2	65	530	5·7	14	4·61
61·1	55·8	51·2	·377	4·2	1·8	71	546	65·1	58·8	53·7	·412	4·5	2·3	67	541	4·0	10	4·06
71·6	64·9	60·0	·540	5·8	3·0	67	532	79·9	67·5	59·3	·501	5·5	6·3	51	523	2·8	sum. 67	sum. 19·42
15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33

at 8 a.m. and 4 p.m. are practically the same ; in all other months the reading at 4 p.m. is lower than at 8 a.m. ; the greatest difference is in June, 0·025 inch. The mean for the year at Tiberias was 0·08 inch, being four times greater than in England.

The numbers in the 7th column show the mean monthly pressure of the atmosphere ; the highest was 30·789 inches, in January, and the next in order 30·715 inches, in December ; the lowest was 30·378 inches, in July, and the next in order 30·404 inches, in August. The mean for the year was 30·584 inches.

The highest temperature of the air in each month is shown in column 8. The first day in the year the temperature reached 90° was on April 4th, and there were 3 other days in this month when the temperature reached or exceeded 90° ; in May, 16 days ; in June, July, August, and September it reached or exceeded 90° on every day ; in October on 26 days ; and in November on 2 days ; thus the temperature reached or exceeded 90° on 170 days during the year. At Jerusalem the temperature did not reach 90° till May 23rd, and there were only 36 days in the year on which the temperature was as high as 90°. At Tiberias the temperature was as high as 103° on May 23rd, and reached or exceeded 100° on 5 other days in this month ; in June on 15 days ; in July on 20 days ; in August on 17 days ; in September on 4 days ; and in October on one day ; thus on 63 days in the year the temperature reached or exceeded 100° ; at Jerusalem the temperature was as high as 102°·5 on June 17th, and reached or exceeded 100° on one other day in this month, and on one day in July ; thus on only 3 days in the year did the temperature reach or exceed 100°. The highest temperature in the year at Tiberias was 112°, on June 17th ; at Jerusalem the highest was 108°, on June 18th.

The lowest temperature of the air in each month is shown in column 9. The lowest in the year was 39°·0, on both January 19th and February 18th ; and from February 18th to the end of the year there was no temperature so low as 39°, the nearest approach being 44° on March 1st ; thus the temperature was as low or lower than 40° on only 2 nights during the year. At Jerusalem the lowest in the year was 27° on both January 20th and 21st ; and there were 113 nights in the year when the temperature was as low or lower than 40°.

The yearly range of temperature at Tiberias was 73° ; at Jerusalem it was 81°.

The range of temperature in each month is shown in column 10 ; and these numbers vary from 34° in December, to 53° in both May and September. At Jerusalem the range varied from 30° in January to 57° in June.

In column 11 the mean of all the high day temperatures in each month is shown. The lowest was 63°·8 in January, being 13°·3 higher than at Jerusalem ; the next in order were 66°·1 in February, and 68°·9 in December ; the highest was 101°·1 in July ; the next in order were 100°·5 in August, and 99°·7 in June. At Jerusalem the lowest were 50°·5 in January, 52°·9 in February, and 55°·8 in December ; the highest

were 87°·6 in June, 87°·4 in July, and 86°·7 in August. The mean for the year at Tiberias was 83°·9; at Jerusalem it was 71°·8.

In column 12 the mean of all the low night temperatures in each month is shown; the lowest was 46°·5 in January; the next in order were 47°·8, in February, and 50°·8 in March; the highest was 72°·7 in July; the next in order were 72°·6 in August, and 69°·2 in September. At Jerusalem the lowest were 34°·1 in January, 35°·7 in February, and 36°·7 in December; the highest were 60°·1 in July, 59°·2 in June, and 58°·9 in August. At Tiberias the yearly value was 60°·3; at Jerusalem, 48°·2.

In column 13 the mean daily range of temperature is shown in each month; the smallest was 17°·0 in December; the next in order were 17°·1 in November, and 17°·3 in January; the largest was 30°·8 in June, and the next in order were 28°·5 in May, and 28°·4 in July. At Jerusalem the smallest were 16°·4 in January, 17°·2 in February, and 19°·1 in December, and the largest were 29°·0 in October, 28°·4 in June, and 28°·3 in September. The mean daily range for the year at Tiberias was 23°·6; at Jerusalem it was 23°·6.

The mean temperature of the air, as found from the maximum and minimum temperatures only, is shown in each month in column 14. The lowest was 55°·2 in January; the next in order were 57°·0 in February, and 60°·4 in December; the highest was 86°·9 in July; the next in order were 86°·6 in August, and 84°·3 in June. At Jerusalem the lowest were 42°·3 in January, 44°·3 in February, and 46°·2 in December; the highest were 73°·7 in July, 73°·4 in June, and 72°·8 in August. At Tiberias the yearly value was 72°·1; at Jerusalem, 60°·0.

The numbers in the 15th and 16th columns are the mean readings of a dry and wet-bulb thermometer, taken daily at 8 a.m. If those in column 15 be compared with those in column 14, it will be seen that those in column 15 were a little higher in March, October, November, and December, and a little lower in all other months. The mean for the year was 71°·6, differing by 0°·5 from the mean of the year as determined by the use of the maximum and minimum thermometers; should this be the case in future years, the mean temperature may be approximately determined by a single reading of the thermometers taken daily at 8 a.m.

The numbers in column 17 are the temperature of the dew-point, or that of the temperature at which the air would be saturated by the quantity of vapour mixed with it; the smallest difference between these numbers and those in column 15 was 8°·6 in April; from May to December the smallest difference was 9°·5 in November, and the largest, 17°·9, in October.

The numbers in column 18 show the elastic force of vapour, or the length of a column of mercury in inches corresponding to the pressure of vapour; the smallest was 0·302 inch, in January, and the largest, 0·793 inch, in August.

In column 19 the weight in grains of the water in a cubic foot of air

is shown ; it was as small as 3·4 grains in January, and as large as 8·4 grains in August.

In column 20 the additional quantity of water required to saturate a cubic foot of air is shown ; it was as small as 1·3 grain in January, and as large as 5·7 grains in July.

The numbers in column 21 show the degree of humidity of the air, saturation being represented by 100 ; the largest numbers appear from November to April, and the smallest from May to October, the smallest of all was 54 in October.

The numbers in column 22 show the weight in grains of a cubic foot of air, under the mean atmospheric pressure, temperature, and humidity of the air ; the largest number was in January, decreasing to the smallest in July, and then increasing to December.

In columns 23 and 24 are the mean readings of a dry and wet-bulb thermometer taken daily at 4 p.m. By comparing the numbers in column 15 with those in column 23, the increase of temperature from 8 a.m. to 4 p.m. is shown ; in December the increase was only 4°·0, and in June it was as much as 14°.

In column 25 the temperature of the dew point at 4 p.m. is shown. By comparing these numbers with those in column 17, it will be seen that the temperature of the dew point in June was lower than at 8 a.m. by 6°·1, decreasing to 0°·5 lower in October. The numbers in this column were smaller than those in column 23, by 12° in January, increasing to 35°·3 in June, then decreasing to 11°·4 in December ; the differences between the temperature of the air and that of the dew point are very much larger than those at 8 a.m. ; in several months it was more than twice as large.

On several days in the summer months at 4 p.m. the reading of the dry-bulb thermometer exceeds that of the wet by 25° or more, and the temperature of the dew point was from 38°·7 to 57°·8 lower than the temperature of the air, as shown by the following table :—

Month and Day.	Reading of		Temperature of the Dew Point.	Temperature of the Dew Point below Dry.
	Dry.	Wet.		
	°	°	°	°
May 27	104·0	79·0	65·3	38·7
June 7	97·0	69·0	54·1	42·9
8	103·0	71·0	53·1	49·9
9	102·0	76·0	61·5	40·5
10	98·0	72·0	56·9	41·1
11	98·0	73·0	58·5	39·5
13	98·0	71·0	55·4	42·6
14	101·0	70·0	52·3	48·7
15	110·0	72·0	52·2	57·8
16	105·0	79·0	64·7	40·3
17	110·0	74·0	55·3	54·7
July 15	108·0	76·0	59·0	49·0
16	106·0	75·0	58·3	47·7
17	98·0	73·0	58·5	39·5
26	102·0	75·0	59·9	42·1
27	106·0	75·0	58·3	47·7
28	106·0	77·0	61·3	44·7
Aug. 13	102·0	76·0	61·5	40·5
Oct. 16	102·0	72·0	55·2	46·8

In column 26 the elastic force of vapour is shown, and by comparing the values with those in the same month at 8 a.m. we find that in June it was smaller at 4 p.m. by 0·128 inch, decreasing to 0·014 inch smaller in October, and larger than at 8 a.m. in the months from January to May, and in November and December.

In column 27 the amount of water in a cubic foot of air is shown, and the amount is smaller than at 8 a.m. in February, and in the months from May to October.

In column 28 the amount of water required to saturate a cubic foot of air is shown; it was as large as 12 grains in June, and as small as 2·1 grains in January.

In column 29 the degree of humidity is shown, the driest months were from June to October, the value for these months varying from 31 in June to 45 in September.

In column 30 the weight of a cubic foot of air is shown, the smallest was 503 grains in July, and the largest, 547 grains in January.

In column 31 the mean amount of cloud in each month is shown; the month with the smallest amount was October, 0·3, and the largest, November, 5·7.

In column 32 are given the number of days of rain in each month; the largest was 14, in both January and November. The total number in the year was 67. At Jerusalem rain fell on 65 days.

In column 33 the monthly fall of rain is given. The heaviest fall of rain on one day in the months from January to April was 1·10 inch, on March 29th; the next in order were 0·90 inch on January 7th, and 0·77 inch on March 3rd. No rain fell from May 5th till November 6th, making a period of 184 consecutive days without rain. The fall of rain on November 6th was 1 inch, and 1·20 inch fell on December 18th. The heaviest monthly fall in the year was 4·61 inches, in November, and the next in order, 4·06 inches in December. The total fall for the year was 19·42 inches. At Jerusalem the total fall for the year was 35·38 inches.

THE
PALESTINE EXPLORATION FUND.

NOTES AND NEWS.

The Firman for excavating at Jerusalem terminated on 20th June; Dr. Bliss will come to England immediately to prepare for publication a memoir of the three years' work and its results. Application has been made by the Committee to the Sublime Porte for permission to undertake excavations elsewhere.

The general work of exploration in Palestine by means of excavations is full of promise. The remarkable success which has attended the excavations at Tell el Hesy and Jerusalem is sufficient indication of the important results which may be expected from such investigations if judiciously and perseveringly conducted.

The Committee regret that on the expiration of the Firman Mr. Dickie's connection with the work of the Fund ceased. His original contract was for six months, but he very kindly continued his services as long as the excavations at Jerusalem were being carried on, and has rendered valuable aid by his beautiful plans and drawings as well as in assisting Dr. Bliss in superintending the work.

We are permitted to publish in the present number a translation of an important paper by Professor Clermont-Ganneau on the recent remarkable discoveries at Mâdeba, which appeared in his "Recueil d'Archéologie Orientale" (Paris, Ernest Leroux). Mr. Dickie was requested by the Committee to visit Mâdeba for the purpose of obtaining an accurate tracing of the Mosaic Map of Palestine, but unfortunately, owing to local circumstances, his visit was not successful.

It is hoped to publish shortly a translation of an essay by M. Clermont-Ganneau on the "Capture of Jerusalem by the Persians in 614 A.D."

The Right Rev. W. R. Brownlow, Bishop of Clifton, writes with reference to "The Hodoeporicon of St. Willibald," which he kindly translated and edited for the Palestine Pilgrims' Text Society, that, when visiting Lucca last November, he saw the tomb of St. Richard, the father of St. Willibald. On the front of his altar there is an inscription enclosed in a circle as follows:—

"I could not discover any fragment of the inscription copied by Evelyn in 1645. There was an old worm-eaten copy of it, printed on paper, and mounted on a board. The old Church of St. Frediano, Irish Finnian, is extremely interesting, and dates from the sixth century, as also is the Cathedral.

"I thought you might be interested to know that St. Richard, whom Mr. Kerslake makes out was King of Crediton, is still known at Lucca."

Professor R. Phenè Spiers, F.S.A., is preparing a paper on the Great Mosque of the Omeiyades at Damascus. Mr. Dickie has been recently there to examine certain points which it was desirable to clear up, and the results of his investigations will be published with the Professor's paper, which it is noped will be ready for the October *Quarterly Statement*.

Dr. Schick reports that the hotel at Jericho has been open during the past season. Carriages now go down from Jerusalem as far as the Jordan and Dead Sea. On the high ground by the shore of the latter a *café* has been established, and a few people have been living there. The steamer has ceased to work, and its machinery is being transferred to another boat of different construction.

The New English Mission Hospital at Jerusalem was opened in April. It is a very fine Institution, built upon the isolated block system from plans by Mr. A. Beresford Pite, of Hanover Square, London. There was a large assembly at the opening, nearly all the communities and nationalities in Jerusalem being represented.

The income of the Society, from March 22nd, 1897, to June 23rd, 1897, was—from annual subscriptions and donations, including Local Societies and Lectures, £271 12*s*. 7*d*.; from sales of publications, &c., £279 8*s*. 8*d*.; total, £551 1*s*. 3*d*. The expenditure during the same period was £973 0*s*. 5*d*. On June 23rd the balance in the Bank was £138 0*s*. 0*d*.

Dr. Post's "Flora of Syria, Palestine, and Sinai," is now ready, and may be obtained on application to the author at Beirût.

The work embraces 126 orders, 850 genera, and 3,416 species, many of the latter, as well as numerous varieties, being new to science. It is illustrated by 445 woodcuts, and a coloured map, showing the botanical regions of the district covered. It contains a general analytical key to all the orders, and special keys to the larger tribes and genera. Much labour has been expended on these keys, and it is hoped that, by their means, the usefulness of the book will be greatly increased, especially for students and travellers.

The following gentlemen have kindly consented to act as Honorary Local Secretaries :—

Alexander Kenmure, Esq., Seoul.
Rev. F. W. Carpenter, M.A., Stockport.
Rev. Rowland Scriven, M.A., Dublin, in place of the Rev. Maurice Day, resigned.
Percy D'Erf Wheeler, Esq., M.D., F.R.C.S., Jerusalem.
Rev. Albert A. Brockway, New York.
W. B. Ridges, Esq., Los Angeles, California.

Memo. for Subscribers to the Survey of Palestine.—In the original programme it was intended that the "Archæological Researches" of M. Clermont-Ganneau should be published in one volume, but the work increased so much since its commencement that the Committee found it necessary to arrange for the publication of the whole in two volumes. Vol. II has been published in advance for the reasons stated in the prefatory note.

Vol. I, which treats of Jerusalem and its neighbourhood, is now well forward, and, when ready, will be sent out to the first 250 Subscribers without any increase in their subscriptions for the full set.

The set consists of "The Survey of Eastern Palestine," by Lieut.-Colonel Conder, LL.D., R.E., in one vol.; "The Fauna and Flora of Sinai, Petra, and the Wâdy 'Arabah, by H. Chichester Hart, B.A., in one vol.; "The Archæological Researches," by Professor Clermont-Ganneau, in two vols. Four volumes in all.

There are only a few copies of the sets left at the price of £7 7*s*.

An important work by Lieut.-Colonel Conder, R.E., entitled, "The Latin Kingdom of Jerusalem"—1099 to 1292 A.D.—and describing the condition of Palestine under the Crusaders, was published in January. It is based on the chronicles and contemporary accounts, both Christian and Moslem, and on the information collected during the progress of the Survey, with descriptions of the scenes of the important events, and other information not to be found in previous histories of the Crusades. The whole forms an octavo

volume of over 400 pages, with two maps, giving the Crusading names and boundaries of the "Fiefs" throughout Palestine.

The Committee have to announce that in accordance with a circular letter published in "Notes and News," January *Quarterly Statement*, 1896, the following translations have been issued to subscribers to the Palestine Pilgrims' Text Society :—

"Marino Sanuto's Secrets,"
"Burchard of Mount Sion,"
"Jacques de Vitry,"

and that a translation has been made of Behâ ed Dîn's "Life of Saladin," A.D. 1145-1232, which forms the concluding work of the Text Series.

This translation has been compared with the original Arabic, and annotated by Lieut.-Colonel Conder, LL.D., R.E., with a preface and notes by Major-General Sir Charles Wilson, K.C.B., F.R.S., R.E.

The work is now being issued to subscribers.

A complete set of the translations in 13 volumes, with general index, bound in cloth, price £10 10*s*. A catalogue describing the contents of each volume can be had on application to the Secretary, 24, Hanover Square.

Major-General Sir Charles Wilson, the Director of the Palestine Pilgrims' Text Translations, writes in reference to the "Life of Saladin" :—"The present volume closes the series of translations issued by the Palestine Pilgrims' Text Society, and I am glad to take this opportunity of conveying the thanks of the Committee to those gentlemen who have so kindly and readily given their assistance in translating, annotating, and editing the works. Without the cordial assistance of those gentlemen it would not have been possible to carry out the original programme of the Society, and place within the reach of English readers the more important of the records which the early and mediæval pilgrims have left of their pilgrimages to Jerusalem and the Holy Land. The Committee and the Society are also deeply indebted to the Hon. Secretary and Treasurer, who has done so much to further the interests of the work."

Copies of the "Life of Saladin," bound in cloth, with an index, can be had separately. Price to Subscribers to the Fund, 6*s*. 6*d*.

Branch Associations of the Bible Society, all Sunday Schools within the Sunday School Institute, the Sunday School Union, and the Wesleyan Sunday School Institute, will please observe that by a special Resolution of the Committee they will henceforth be treated as subscribers and be allowed to purchase the books and maps (by application only to the Secretary) at reduced price.

The Committee have to acknowledge with thanks the following donations to the Library of the Fund :—

"Christ in His Holy Land." By the Rev. Alexander A. Boddy. From the Author.

"Emmaus Identified." By Mrs. Finn, M.R.A.S. From the Author.

From M. Clermont-Ganneau. Nos. 8–13 of his "Recueil D'Archéologie Orientale," which contains the following, among other, articles:—Cachet israélite aux noms de Ahaz et de Pekhai; Les archers palmyréniens à Coptos; La Grande inscription nabatéenne de Petra; Le sépulchre de Rachel et le tumulus du roi Archélaüs; La prise de Jérusalem par les Perses en 614 (J.—G.); La Carte de la Palestine d'après la Mosaïque de Mâdeba; Épitaphes palmyréniennes d'Alep; Localités arabes de l'époque des Croisades; De Hesbân à Kerak; Les Nabatéens dans le pays de Moab.

The Committee will be glad to receive donations of Books to the Library of the Fund, which already contains many works of great value relating to Palestine and other Bible Lands. A catalogue of Books in the Library will be found in the July *Quarterly Statement*, 1893.

Mr. George Armstrong's Raised Map of Palestine is on view at the office of the Fund. A circular giving full particulars about it will be sent on application to the Secretary.

The third edition of the new Collotype Print or Photo-relief from a specially prepared copy of the Raised Map of Palestine is now ready. Price to subscribers, 2*s.* 3*d.*; non-subscribers, 3*s.* 3*d.*, post free.

The print is on thin paper, measuring 20 inches by 28½ inches.

The museum of the Fund, at 24, Hanover Square, is now open to subscribers between the hours of 10 a.m. and 5 p.m., every week-day except Saturdays, when it closes at 2 p.m.

It may be well to mention that plans and photographs alluded to in the reports from Jerusalem and elsewhere cannot all be published, but all are preserved in the offices of the Fund, where they may be seen by subscribers.

While desiring to give publicity to proposed identifications and other theories advanced by officers of the Fund and contributors to the pages of the *Quarterly Statement*, the Committee wish it to be distinctly understood that by publishing them in the *Quarterly Statement* they neither sanction nor adopt them.

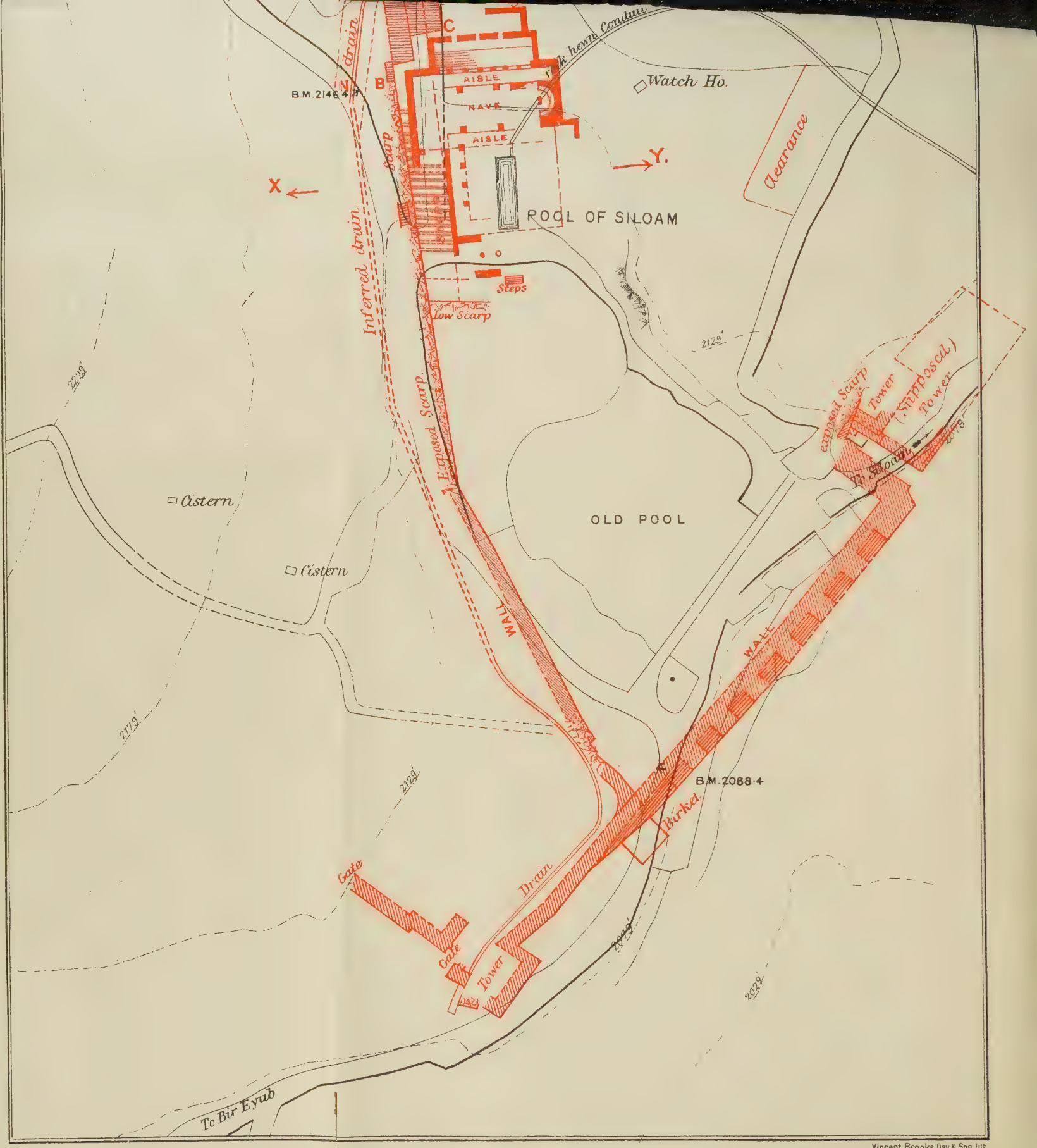
In order to make up complete sets of the *Quarterly Statement* the Committee will be very glad to receive any of the back numbers.

Subscribers who do not receive the *Quarterly Statement* regularly are asked to send a note to the Secretary. Great care is taken to forward each number to those who are entitled to receive it, but changes of address and other causes occasionally give rise to omissions.

The Committee of the Palestine Exploration Fund desire to make clear that they have no book on their List of Publications called "Picturesque Palestine," nor is any person authorised to represent this book as published by the Society; nor has the Society any book-hawkers in their employment.

Tourists are cordially invited to visit the Loan Collection of "Antiques" in the Jerusalem Association Room of the Palestine Exploration Fund, opposite the Tower of David. Hours: 8 to 12, and 2 to 6. Maps of Palestine and Palestine Exploration Fund publications are kept for sale.

Application for Lectures should be addressed to the Secretary, 24, Hanover Square, W.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PLAN TO ILLUSTRATE Dr BLISS'S THIRTEENTH REPORT.

The Detail in Black from the Enlarged Ordnance Survey Plan, the Excavations in red.

PALESTINE EXPLORATION FUND.

THIRTEENTH REPORT ON THE EXCAVATIONS AT JERUSALEM.

By F. J. Bliss, Ph.D.

The work of the present season has thrown much light on the paved street in the Tyropœon. We now understand its relation to the steps leading to the Pool of Siloam, as well as to the gate discovered to the south-west of the pool. The street was first struck at the point M, and followed south as far as the road, or open drain. At H a shaft was sunk in line, but only the concrete bed was found which had been observed further north to underlie the paving-stones. Breaking through this, we found the drain, which was followed north (under the street) and south (under the open drain) to the point F. Thus much has been described before.[1] Accordingly, this season we sunk a shaft at F, above the point where the drain had last been seen, and were pleased to come down upon the paving-stones of the street here *in situ*. Pushing up the street, we soon came to a flight of steps, with breadths of tread varying from 2 feet 6 inches to 4 feet. No kerb was found, but the steps all ended in the same line, which continued (still without kerb) to G, where the angle changed. The 6-inch step, occurring at regular intervals further north, had suggested that the street had not been used for chariots, and the series of steps just described confirms the view.

From G we followed along the altered line of angle for 20 feet, where a kerb 16 inches high, with a rounded corner, projects 22 inches beyond the former line of the street, and runs for 10 feet to another step, beyond which the kerb is again missing. This rounded corner may represent the junction of a side street coming from the west, but no pavement was found to extend in that direction. At I the paving-stones were missing, but we pushed our tunnel on in the same direction for some 33 feet, finding nothing but *débris* and a few paving-stones not *in situ*.

In the meantime we had sunk a shaft at J, above the small branch drain running from the north-west. This was found to run under a branch road, of similar construction to the main road, having a kerb on either side, but with a width of only 10 feet. This was traced north-west for 35 feet, where it was missed; but the drain was followed 80 feet further, where it was cut off by a later building. South of this branch we followed the western kerb of the main street to a point opposite our tunnel from I, and there made a connection between the two. It is evident that somewhere between I and J the street had been broadened towards the west, but the exact point we did not ascertain. Somewher near the junction the main street had also been broadened towards the east, as the kerb was found at K, 7 feet east of the projection of the

[1] See *Quarterly Statement* for October, 1896, pp. 302, 303.

kerb running south from M. This gives the breadth at the junction as 50 feet.

From F south the work was very interesting. The pavement continued only for 25 feet, where it was ruined. The western kerb line was found for 10 feet at L, where it was ruined at either end. To the east of this point a difference of jointing was observed in the pavement, one set of joints following the angle of the kerb line at L, and the other following the angle of the line FG. This difference of jointing is the key to the situation. The drain runs with the first line, the second line points directly to the stairway leading to the Pool of Siloam. The drain was traced as far as N, where it points to the drain running to the gate south-west of the Old Pool. At N and for 70 feet back the covers of the drain are missing, hence the street above it is missing too, but the fact that for 450 feet we have proved this drain to run under the street hints strongly that they continued in connection.[1] The difference in the jointing clearly indicates a fork, hence the inference is a just one that the main road ran down the Tyropœon to the gate just mentioned, with a branch having as its terminus the Pool of Siloam.

When a ruined street, in places 50 feet wide, and buried under 20 feet of soil, has to be examined entirely by tunnels, some details must be necessarily left to reconstruction. The western line of kerb was certainly seen at L, and apparently at FG. Either the road was suddenly broadened to the west at F, or the real western limit ran from L to G (as indicated by dotted line on plan), the joint-line of the fork leading to the steps having been carried back to G.

On the plan it will be seen that a good part of the space between the fork of the road and the steps is occupied by the large blockage and the Byzantine Church, both, of course, later. On the longitudinal section it will be seen that between the level of the street at the fork F and the level of the top step of the stairway found leading to the Pool of Siloam there is a difference of 25 feet. Accordingly, we have reconstructed a flight of steps between the two points, in the space mainly occupied by the blockage and church. The top step of the stairway, actually seen, has a broader tread than any of the rest, hence it may be a landing between the two parts of the flight. From the account of Antoninus Martyr we gather that the street was still in use at the time of the church, which, however, is built over the steps leading to the pool. A new descent may have been formed from F to the atrium, the approach to the pool being then through the church, as described before. The main line running to the gate may still have been in use. The relation some distance beyond the fork between the levels of the drain, presumably under the main road, and the branch with steps leading to the pool, may be seen in Section XY, taken across the Tyropœon, where it seems to narrow to a neck at the point where the pool occurs.

[1] The fall in the street from N to the gate would be about 1 in 13, hardly more than the average fall ascertained further north.

In the October *Statement* we reported that the street had been traced 55 feet north from M along its eastern kerb. We have since then traced it uninterruptedly north, with a slight deviation of angle, to 125 feet to O. The characteristics are the same as before described. There is the same gradual incline, and at fairly regular intervals occur steps. At a point some 100 feet north of M a fine flight of steps projects some 5 feet beyond the kerb line. The steps are five in number and are turned around both angles. The landing step is only 5 feet 4 inches across. Hoping that it might lead to an interesting building we pushed back, but only to find that the house to which it belonged was quite ruined, only a sort of cellar remaining as seen in one corner. At O the street is ruined, but the drain has been traced for 220 feet further. Where the covers are missing the street is missing also, but at points where the covers are *in situ* we are making attempts to recover the street.

A section has been taken longitudinally through the street and drain from a point north of O to the fork, and then along the branch with steps leading to the Pool of Siloam. It will be seen that the street crosses the valley at an angle. At M it is well up the eastern slope as may be seen by a comparison with Section CD. At J it is nearer the bed. At B the branch leading to the pool has crossed over to the western slope, the main road which follows the drain at a higher level being here, of course, considerably higher up the western slope (compare Section XY). The relation between the drain and the bottom of the valley is seen at M in Section CD. The exact point where the drain runs across the bed of the valley was not ascertained, but taking into account the fall in the base of the drain, and the probable fall of the valley-bed, we assume that at that point there are about 35 feet of accumulation between the two. At J a shaft was sunk to the rock, but no signs of a more ancient roadway were found. From M north for some distance the rock forms the bed of the drain, on which the roadway is directly built.

In the third shaft north from O the drain-bed rests on *débris*, through which we have sunk some 10 feet, and at last date of writing rock has not yet been found. This suggests that the road may have crossed the valley twice. The drain is now heading to a point 90 feet east of the south-west corner of the Haram Enclosure, where Warren found the bed of the valley. A slight change of angle would bring it under Robinson's Arch.

In following the street especial attention was given to two questions. First: Did any branch road lead towards Ophel? Second: Did a contemporaneous wall run across it at any point? In order to determine the first question it was necessary to follow the eastern kerb From M this was pursued north to O where it was ruined, no branch being found. From M it was followed south for 18 feet, when we pushed west to find the breadth and then followed the west kerb. At K the east kerb was found again (though ruined a few feet south of this), the street being broadened as described before. I wished this season to examine the

unexplored portion between K and M, but the open drain above made this impossible. At H and for 70 feet south the pavement of the eastern part of the roadway was found to be destroyed. Thus at the places where examination was possible it will be seen that no branch was found.

As to the second question, that of a contemporaneous wall crossing the line of street, it has been proved that no such wall exists between L and M. For between these points the pavement has been traced continuously (with one exception) showing no signs of wall or gate. The exception is the distance between I and a point some 20 feet south of J, where we got off the line. But our tunnel from I north, to a point where we connected it by a side tunnel with the one from J, ran across the line of the problematic wall, and proved our negative as conclusively as if we had run along the street itself.

Immediately to the south of L occurs the large blockage, clearly later than the street and the steps, as it forms a barrier between these two constructions, which must have been in connection. This blockage is not a city wall, but some apparently isolated building, as it has corners at B, C, and D. It is, of course, possible that this later blockage occupies the place once crossed by a city wall and gate, but the probability is slight, as we would scarcely expect a gate beyond the point where the road had forked. Moreover, the drain actually leads to a wall and gate. That the road followed the drain is made likely by the fact that in the portion of the latter traced near the gate surface inlet openings were found similar to those that opened down from the street.

So important seemed the search for a wall crossing the Tyropœon that we made this search double. For not only was the street followed continuously, but the bed rock was pursued by tunnels from the Pool of Siloam to a point somewhere south of M—a distance of more than 350 feet. In this search many remains of building were found. First came the blockage described before, which remains as much of a mystery as the tower immediately north of the aqueduct on the western hill. Many thin house walls were encountered, all on the rock, none of them built with lime. The stones of one were well squared and set, averaging 14 inches high, with picked centres and chisel-drafted margins. At one point was found a cistern set on the rock with masonry walls, having a double lining, the inner coat being made of lime and broken pottery and the outer of lime and ground pottery, a cement known to the Arabs as *Hamra*. At another point were found fallen several large paving-stones, 14 inches thick, pick-dressed.

To prove a negative is in some instances an endless process. For example, starting with a good clue we have traced a wall from the Protestant Cemetery, down the western hill, across the valley and up on to Ophel. This wall was quite ruined at several points, but as the line became clear, it was always picked up again. Supposing the search for it had been conducted by driving only one or two long tunnels north and south, and that these tunnels had happened to cross the line where

the wall had been completely ruined? In the case of the supposed wall crossing the Tyropœon on the rock we have proved that no city wall now crosses the path of the tunnel 350 feet long, driven north and south, but to affirm that no such wall exists at some point to the east and west of our tunnel would not be scientific. The only way to exhaust the possibilities would be by the tremendous task of driving a series of parallel tunnels, or of clearing out a large part of this deep valley!

That no such wall existed contemporaneously with the street and drain seems, however, to be pretty well proved. In absence of inscription or such positive data one does not wish to be dogmatic, but I think we have a pretty clear case that the City Wall in the time of the Romans existed in the line we have traced our wall. The Byzantine Church offers a definite starting point for the argument. This is built over the steps leading to the pool, and is consequently later than these. The steps are contemporary with the street, and the latter certainly appears to be of Roman work. This street almost certainly had its terminus in the wall which includes both pools of Siloam. The gate would thus have been in use during Roman times. Against this view we have certain interpretations of two passages of Josephus. First comes that in "Wars," V, 4, 2, where he speaks of the bending of the wall above the Fountain of Siloam. This is taken by some to mean a curve to the north of the pool which it excludes from the city. But our plan in the April *Quarterly* shows how, after crossing the Tyropœon outside the Old Pool, the wall turns up at Ophel where it overlooks the pool in a way that might well be called "a bend above Siloam." We have shown how the wall here has been repaired many times, suggesting that the original work must have been very early.

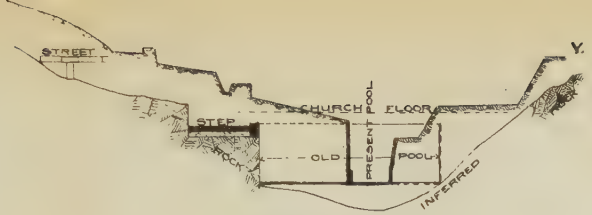
The second passage is "Wars," V, 9, 4, where Josephus in his speech refers to "Siloam, as well as all the other springs that were without the city," as being in the hands of the Romans at the time of the siege. Note the word "spring." May not this refer to the Virgin's Fountain, to which, as source of the pool, the name of Siloam may have been equally applied? This place was without the walls, and though the approach was probably concealed, yet the secret may have been betrayed to the Romans or discovered by them in some way. The very *raison d'être* of the Siloam tunnel seeems to have been to bring the water within the limits of the city. It is worthy of note that while we have devoted immense labour to testing the contrary theory, yet all our discoveries have tended to support this view.

I must now describe Section CD, which comprises a line starting some 350 feet west of the Cœnaculum, running down to the bed of the Tyropœon, and up on to Ophel. This section was made with a double purpose. The first was to ascertain whether the ancient Upper City had a wall of its own, which this section might strike at right angles. Such a wall should finally have run along the cliff inside the modern city west of Robinson's Arch, the top of said cliff having a level of about 2,429. This study was begun some 175 feet west of the point actually shown in

the section. Between the point of starting and what I mark as Shaft I, the Augustinians had examined most of the ground to the rock. The results of this work (negative as far as concerns an ancient wall) were described on p. 304 of the *Quarterly* for 1896. I mentioned that the Augustinians had removed masses of masonry at O and J (*see* plan facing p. 208, 1896), but both are in line of the Crusading or Saracenic wall we have described before, and if not belonging to it probably represent later constructions. This late wall gave no signs of having been built on an old line. In Shaft I the rock was found at a depth of about 15 feet with a scarp descending for 10 feet more, hence the face is 25 feet below the surface which here has a contour level of 2,404. Hence the base of this scarp is some 50 feet below the contour 2,429, the level of the cliff west of Robinson's Arch on which the supposed wall was to run. Accordingly search for this wall further down the hill appeared to be useless.

The second object of the section was to determine the rock contour of the Western Hill and of the Tyropœon Valley. Between Shafts I and II the rock crops out at one point, and a glance at the section will show that no intermediate shafts were necessary. Moreover, the rock is exposed at several points south of the section line. At Shaft II rock-hewn dwellings were found. In Shaft III appeared the wall and scarp (with rock-hewn dwellings) described on pp. 98–99 of the April *Quarterly*, 1897. Scattered all over the Western Hill are these dwellings, generally formed by a scarp from which chambers are cut, containing cupboards, lamp-niches, &c. In Shaft V was found a ruined circular archway, running north and south, resting on an older wall founded on the rock. Built up against this, to the west, is a vaulted cistern in perfect preservation, which must be later, as it blocks the entrance to the archway. Though so near the surface, its existence was unsuspected by the landowner, who now rejoices in a grand supply of water for his vegetable garden. The opening of the archway is 8 feet 4 inches, and the distance from the key of the arch to the floor is 10 feet. A good deal of excavation was done at this point, but with no satisfactory results, as the chamber to the east, into which the arch first appeared to open, turned out not to be bonded into it. In the angles formed by the walls of this chamber and the piers of the arch a water-conductor, formed of clay faucet pipes, runs down to a concrete channel in the floor. The pipe sections are 15 inches long, with a diameter of $5\frac{1}{2}$ inches. They are made of finely-worked clay, the inside slightly furrowed.

In Shaft VI the top of a wall running north and south was found at a depth of 10 feet, resting on the rock, and standing for a height of 30 feet. The upper part is of later construction. The lower part is 6 feet 5 inches in thickness, but the stones are built on small, random rubble. A thin wall is bonded into it at right angles, proving that we have here no city wall. This is further proved by its small masonry, its direction, and, finally, its position almost at the bottom of the valley. Between Shafts VI and VIII the rock was seen almost the whole way, as tunnels were driven from the bottoms of the shafts. The gallery from

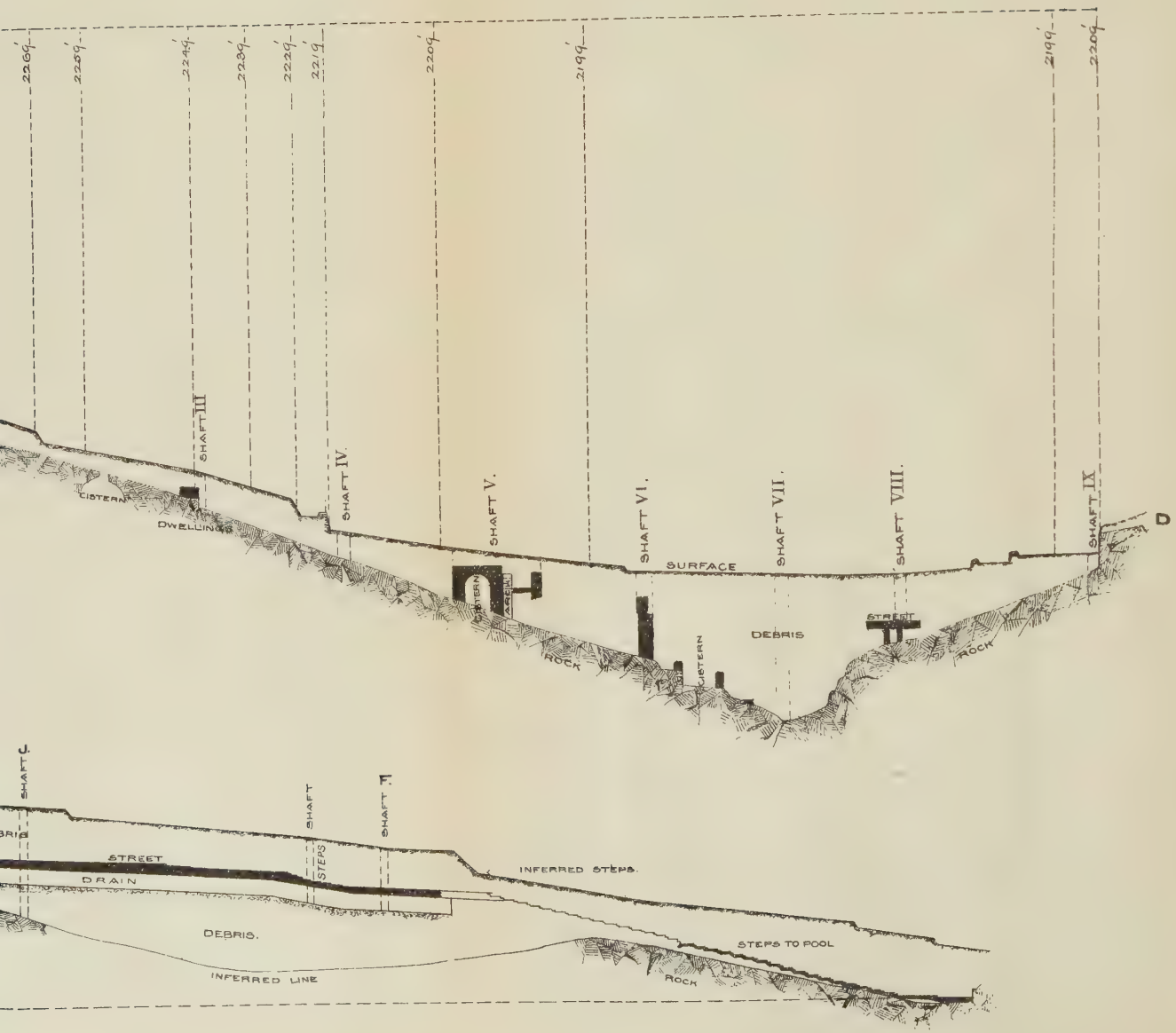


SECTION X.Y.

SECTION C.D. TAKEN FROM ORDNANCE SURVEY CONTOURS

LONGITUDINAL SECTION THRO: STREET & STEPS TO POOL

EXCAVATIONS IN TYROPŒAN VALLEY



Drawn by H. Blair.
Measured by Lieut. C. Wilson

Shaft VII to the east was driven up the rapidly-ascending cliff till the candles ceased to burn.

It may be interesting to note the remains found in Shaft VII, which hit on the very bed of the valley, in order to show how many periods were passed through as we sunk down 70 feet to the rock. For the first 24 feet we found only soil and ordinary *débris*. Then occurred one course of a roughly-built wall. At 30 feet appeared a covered drain 1½ feet square. From the level we infer that this was a feeder to the drain under the street to the east. Then down to 37 feet we passed through nothing but *debris*. Then to 46 feet we encountered fallen stones. Projecting from under these appeared an iron piping, similar to a gas-pipe. At 52 feet was the base of a wall standing to a height of six well-laid courses, forming the angle of a doorway ; the stones were rough-picked. Below this, nothing but *débris* mixed with clay. On the natural rock were 2 feet of white clay. The pottery, which showed Byzantine and Roman types at first, changed to Jewish as we descended.

In Shaft VIII we have the street. The foundations of the houses lining it to the east rest on the rock. Shaft IX was sunk along the exposed scarp, which descends below the surface line for a few feet, the rock then sloping naturally towards the west.

This section, which has taken so few words for its description, involved a great deal of labour. The results are by no means unimportant. Though not finding the desired wall enclosing the upper city, we have determined the form of the Western Hill and have found the true depth of the Tyropœon. To the making of this section we are indebted for striking the street which has turned out to be such an important clue to the topography. For the well-cut stones fallen across almost its entire length, as well as the walls actually *in situ* along the kerb, show how densely populated was this Tyropœon Valley. Signs of buildings found in all the other shafts, at various depths, confirm this view. It is generally assumed that the rock-hewn dwellings were the work of the original inhabitants ; if that be so, we now see that the Western Hill was occupied at the earliest times.[1] Our work taken into connection with that of the Augustinians, has shown that the summit of the hill was occupied in Roman as well as in post-Crusading times, hence it is no wonder that the older wall, if one existed, should have entirely disappeared.

A careful examination is being made of the west slope of Ophel, from the junction between the Kedron and Tyropœon Valleys to a point somewhat north of the point where it is cut by Section CD. The object of this study is to ascertain whether there are any remains of an ancient wall along its top, and whether any rock-hewn steps descended from it into the Tyropœon. I had hoped that this examination would have been complete, so that it might be included in this report. The first

[1] *See* a paper by Dr. Schick on these rock dwellings, in the *Quarterly Statement* for 1890, pp. 12 *et seq.*

question has been answered in the negative, but the search for the steps has not yet been quite exhausted, hence a detailed description must be postponed.

It has been suggested that the apparently unnecessary curve in the Siloam Tunnel before it enters the pool was made in order to avoid the Tombs of the Kings. Accordingly we have made a large clearance to the Rock of Ophel in a field to the east of the pool, south of this curve. This clearance was also in the area also indicated by Nehemiah iii, 16, as being the sought-for site, when this passage is interpreted by the wall we have discovered crossing the valley and running up Ophel. The area excavated is about 100 feet by 36, and as the rock occurs at an average depth of 12 feet, the labour involved was great. The rock is nowhere in a natural condition, having been hewn to form cisterns and dwellings which have been in turn quarried for stones. Our hope was to find a pit entrance to the tombs, but the clearance has been completed this morning, and no such discovery has rewarded our toil. Of course the area excavated is but a small part of the possible area. However, in this excavation was found among the *dēbris* the first specimen of Hebrew writing we have come across in our excavations at Jerusalem. It is a Cornelian seal, half an inch long, having the general scarab form, rounded top and straight sides, but without the detailed markings. It is pierced longitudinally with a hole. Wax impressions have been sent to London. Père Lagrange, of the Dominicans, has kindly favoured me with a reading: יִשְׁמָעֵאל בָּרִיחַ The name Ishmael is, of course, common. The name Bariach occurs in 1 Chron. 3, xxii. Père Lagrange somewhat cautiously suggests the third or fourth century B.C. as the date of this seal.

A few words in regard to our fortunes. I arrived in Jerusalem ready to begin the spring season on March 17th, but one of the severest storms of the season set in, preventing our beginning work till the 29th. Since that time we have had scarcely any rain and the weather has been unusually pleasant and cool. For the first six and a half weeks we were obliged to work without the help of an overseer as Yusif was recovering from an attack of typhoid, contracted in Damascus, and did not arrive till May 11th. As excavation is not a known trade like carpentry it did not seem worth while to train in a substitute.

We owe our thanks to Mr. William Reade, Blackie Scholar for the current year, who most kindly volunteered his help in watching the work. He has had some experience in like work in Athens. I must say that the workmen behaved most loyally, and took little or no advantage of the absence of a constant superintendent. We missed our foreman most when it came to negotiating with the landowners. I confess I am not up to the subtleties of these Fellahîn. The rush of travellers had ceased before we began our work, but we have had many visitors, most of whom have enrolled themselves as subscribers. It was a great pleasure to conduct Dr. Chaplin around the works. We had an appoint-

ment with Canon Tristram, and the tunnels were swept if not garnished in his honour, but the very day before the hoped-for visit there occurred the sad accident to his leg and he was obliged to leave Jerusalem before he was recovered sufficiently to visit us.

Changes have taken place at the Pool of Siloam. The villagers have made a great clearance at the north-west corner of the Original Pool, and have erected a small mosque in the angle, though the flooring is much higher than that of the pool. They have removed the vault by which the aqueduct was approached so that the upper part of the wall of the Original Pool is now exposed for about 36 feet from the north-west corner, part of it being used as the wall of the mosque itself. The story of the erection of this mosque is a long and complicated one and some day I may tell it. How and why we repaired the modern pool I have mentioned before. On our return we found that it contained a depth of water quite sufficient for the lads to swim in, and the women are still filling their jars from the water flowing through the tunnel. Many are the blessings they shower upon us.

The greatest inconvenience in our work has been the open drain which pours an inky stream past our excavations. Our shaft was sunk some 20 feet away, but one day there suddenly bubbled up at the bottom a horrid black spring which compelled us to seek our clue from another point. The odious slime oozed in at another tunnel, which we had to saturate with diluted carbolic acid for our own safety, though the boys declared they preferred the other odours. I suppose we are gradually becoming inoculated, for this season both Mr. Dickie and myself have kept free from fever. However, we have taken the precaution to sleep in town.

Jerusalem, *June 8th*, 1897.

NOTE ON THE SEAL FOUND ON OPHEL.

By Professor A. H. Sayce.

The seal reads :—

(1) לישמעא[ל]
l a 'm shi l

(2) ברידו
u hy r b

"Belonging to Ishmael, Bar-yahu."

The seal is Israelitish, as is shown by the double line between the two names, and the divine name, Yahu. But Ishmael was a foreign name in Judah, and belonged rather to the Aramaic-speaking tribes of northern Arabia, while the use of *bar* instead of *ben* "son" in the second name is also Aramaic. The termination of the second name shows that it cannot be identical with the "Beriah" of the O. T. A ו (*u*) is probably lost at the beginning of the second line, so that the inscription was intended to read: "Belonging to Ishmae[l] [and] Bar-yahu." The forms of the characters are those of the sixth century B.C. For the name of Ishmael at this period, see Jer. xl, 8.

QUEEN'S COLLEGE, OXFORD.

P.S.—Since the above was printed I have seen some casts of the seal which show that a piece of it has been broken off at the head of the letter which I have read *bêth*. The letter in question, accordingly, will be *pê*, and not *bêth*; and in this reading I have the support of Dr. Chaplin. The second name, therefore, is Par-yahu, instead of Bar-yahu—a name, by the way, which is almost inconceivable if the first element in it is to be regarded as *bar* "son." The casts show no sign either of *lamed* at the beginning of the first line, or of space for a *waw* at the beginning of the second line; there are traces, however, of the final *lamed* in the first line. We should thus have "Ishmael, Paryahu."

THE (SO-CALLED) TOMBS OF THE KINGS AT JERUSALEM.

By Dr. CONRAD SCHICK.

THE rock-cut tombs, called "Kabûr es Saladeen"[1] and "Tombs of the Kings," are situated north of the present city 2,500 feet distant from the northern gate, or "Bab el 'Amûd"—being the largest and most elaborate of the many rock-cut tombs in the neighbourhood of Jerusalem. They are also comparatively well preserved, and are described more or less fully in all modern guide-books, as well as by many travellers and pilgrims in ancient times, especially in the last three centuries.[2] Many added to their description a plan made by Pococke, Catherwood,

[1] The "Name Lists" of the Survey of Western Palestine have Kabûr es Salatân.—[ED.]

[2] Maundrell, in 1697, gives a clear description, although he made some mistakes, and says nothing of the closing rolling stone; but he describes in full the doors of the chambers.

Niebuhr, and others, which were repeatedly simply copied by succeeding writers. Robinson copied Pococke's plan. In 1865 a new and more complete plan was made by the Ordnance Survey (Sir C. W. Wilson), which I have used in forming the accompanying one, adding only what has come to light since, but on a smaller scale, so that there can be no important mistakes, even if I have not measured by myself the things in detail.

All the plans hitherto published (so far as I know) include only the group of tombs, leaving out the surroundings and things directly connected with them; this lack I wished in the present paper, with its drawings, to supply.

In modern times there were excavations made on two different occasions. In the year 1863 M. de Saulcy cleared the earth from all the chambers, and examined minutely the rock everywhere, and in so doing found another chamber closed up; it was opened, and a stone sarcophagus covered with earth found there. In this sarcophagus were still the remains of bones. It was believed to have been that of a queen, and was taken to Paris, where it stands in the Louvre. There was at the time much talk about it, some even said it was the grave of King David. It happened that I had just at that time to build a house for the Jewish Mission of an English society on the western height, 20 minutes outside the city wall, on a place called afterwards "The Sanatorium." One day when I intended, as on other days, to go home at noon, when I came to the gate of the city I found it locked, it being Friday; so I had to wait about an hour, and occupied the time in riding my donkey about the neighbourhood, and coming in the rear of the Tombs of the Kings I observed a good number of workpeople just taking their hour of rest, so I went nearer and asked one what they were doing. The overseer answered that they were clearing the tombs and had found a new chamber with a stone coffin, which he offered to show to me. So I followed him, leaving my animal in care of another. I found that they had really, on the north wall of the first or chief chamber, opened a hitherto unknown chamber. I went in, and saw the coffin still sticking in the earth, but with the lid put aside. By the light of a candle I examined the coffin and its cover more closely, and observed some mouldings cut on it, but saw no writings, as it was covered with dirt. So I resolved to come again the next day, when all would be cleared and cleaned, and then see whatever there might be on the outside of the sarcophagus; but when I came the next day I was not allowed to go in. When the work was ended M. de Saulcy left the country, taking with him the coffin. When there was again free access to the tombs I found a number of Jews—men and women, old and young—busy carrying baskets of earth, &c., taken out by M. de Saulcy, again into the chambers where it had been before. On my asking for the reason of their doing this, they told me the Messiah will now come, as Jeremiah viii, 1, is fulfilled, and that it was their duty to bring the dust of former bodies into their tombs again. But by this they acted contrary to the 2nd verse of the same chapter.

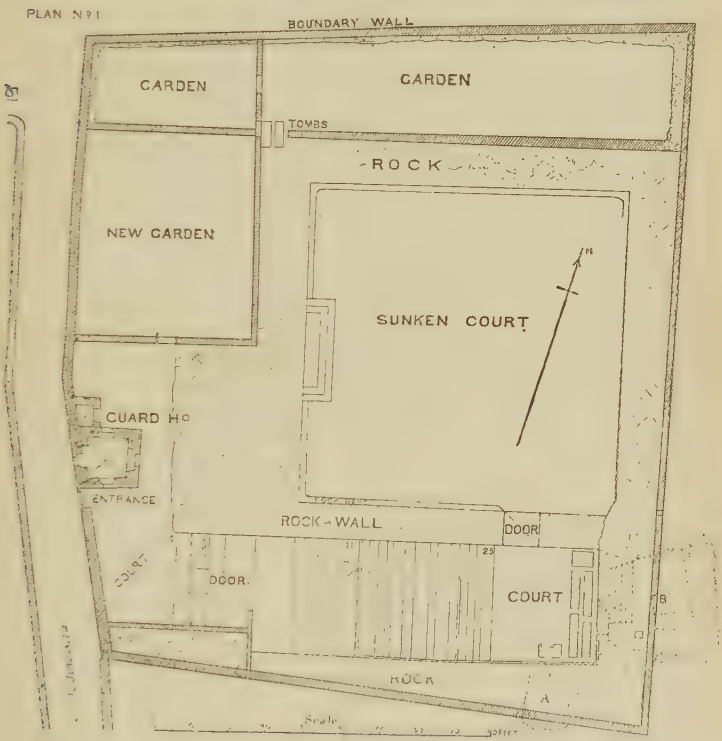
A few years later, I think it was in 1878, the field in which these tombs are was bought (with the tombs themselves) by a French Jewish lady, it was said, for 30,000 francs. Then the boundary wall was erected, and when closed up round about, the tombs, the chambers, the courts, cisterns, &c., were properly cleared, and the earth put up on the surface of the rock and made into a kind of garden, as Plan No. 1 shows. The door in the boundary wall is on the western side, but not in its middle, more to the south, on the public road leading to Herod's Gate of the city. Coming in by the boundary wall door there is on the left-hand (north) a newly-built room or lodge for the watchman, with an additional little place as stable, &c. Further north in the new garden was found another kind of rock-tomb similar to those Sir C. W. Wilson had excavated in 1865 further north, nearer the bottom of the Valley "El Jos."[1] This kind of tomb seems to me to be of Christian origin.

Going from the watchman's house towards the south-east one comes to a kind of trench, or decline, between rock walls. When the earth lying there was removed, a flight of steps appeared cut in the rock, but very irregular, varying greatly in height and breadth, for the height is from 8 to 10 inches, and the breadth from 16 inches to 4 and 5 feet, the broadest even 11 feet. They are 25 in number, of which the five upper ones are 20 feet long; the others (lower ones) 31 feet long (*see* Plan No. 1 and Elevation Sections Nos. 3 and 4). In the middle of the steps 2 and 3 was formerly a kind of door, the holes for the sockets are still visible in the rock, and step 3 is left rather rough, except the space for the passage or door. The eleventh step is nearly 6 feet broad, and on its surface is cut a bowl-shaped hollow for gathering the rain-water coming down from the higher steps and a kind of court at their top, or western end. A short gutter cut in the step brings the overflow of the water to the next step below, which has along its whole length a groove or gutter with a decline towards the south, where, on the rock wall, is cut a gutter running eastward to the cistern B on the east side. So it is again (but without a basin) on the twenty-second step, bringing the water to the smaller cistern marked A in the south wall (*see* Plans Nos. 1 and 2, and the Elevation and Sections Nos. 3 and 4).

These two cisterns are cut in the rock, or into the side walls of the rocky stair-trench, and are of a peculiar kind seldom found on this side of the Jordan, but often in the trans-Jordanic land. I have seen such only in the neighbourhood of Hebron, and in the underground of ancient Jerusalem, also the cave beneath the rock in the large mosque or "Dome of the Rock" seems to have been originally such a cistern. The usual ancient cisterns are cut in *horizontal* rock; first the mouth to some depth, and then widening in all directions; but these are made by cutting a hole or opening (often door- or window-like) in a *vertical* wall of rock, and deepening and widening to the right and left and especially towards

[1] *See* Ordnance Survey, "Jerusalem," 1865, Plate XXVI, No. 7, or Excavation No. XII in the "Notes," p. 76.

the mountain or side opposite the entrance. When such a cistern is deep, and the opening goes down in a slanting direction, rock steps are left, so that a person can go down to the level of the water at any height, and get it by means of a vessel held in the hand, no bucket with a rope being required, as is necessary with other cisterns. These cisterns have generally no opening in the roof; yet the larger one here has such, but more for the purpose of letting the water run in from the upper surface, than for taking it out. As may be seen by the plan and sections, A has one opening in the rock wall, but B two. In B, or the eastern one, a



GROUND PLAN OF THE (SO-CALLED) TOMBS OF THE KINGS.

square pier was put at some later time as a support for the roof. In front of these two cisterns are a number of rock blocks, quarried to procure well-shaped stones—but not detached from the rock. They were used as steps by people going up to the cistern openings to fetch water.

Between these blocks and the last step of the broad stair is a kind of level court, from it one can go northwards and three steps down through an opening or doorway in the 9 feet thick rock wall into the large open court. This doorway is 10 feet wide, and averages 19 feet high. It is

arch-shaped at the top, and has no door. Having passed through it we are now in a large court with rock walls 28 feet high round about. The court is nearly a square, 85 feet from east to west, and 87 feet from south to north. The bottom is to some degree level, and rock, having no other flooring. Along the sides, except the eastern, runs a rock bench or seat, and near the north-west corner, in the flooring, is a bowl-shaped excavation to take up the surface water (*see* Plan 2).

In the middle of the western rock wall is a large square opening 28 feet long and 15½ feet high. To some degree the sides of it, but especially its top part, have in relief very fine sculptured decorations in a somewhat altered Doric style, with grapes, &c., described already in many books, and as Sir C. W. Wilson says[1]:—"Some of the decorations have disappeared under the chisel and hammer of some enterprising traveller." In this opening once stood two pillars (as may be seen on the architrave), dividing the opening into three entrances, the middle one somewhat wider than the side ones, which latter had from the jamb to the pillar a parapet of about 4 feet high, most probably in some leaf work or lattice-shaped form, so that the middle opening was the real entrance to the vestibule, which is 38½ feet long and, without the jambs, 14 feet wide and 18 feet high. The ceiling is also rock and level, having only round about a small moulding. The floor is nearly 3 feet higher than the floor of the large court; four angular steps lead up to it. In front of them stood most probably four pillars, two opposite the jambs, and two opposite the two vestibule pillars, as it is shown by dottings in Plan 2. These outer pillars, including chapiters and basements, must have been about 26 feet high, so that their architrave was as high as the highest part of the frieze, and other mouldings. On the top of these mouldings on the one side, and on the architrave of the pillars on the other side, the covering stones were laid, with a fine moulding towards three sides, and on it were put the basements for the three pyramids which Josephus mentions[2] to have been on the mausoleum of the family of the King of Adiabene, and all scholars agree that these "Tombs of the Kings" are those of Helena and her family, erected about the beginning of the Christian era. The age of these tombs is also indicated in the architecture and the character of the mouldings; the high inner doors are also found in other tombs of the Herodian period. That these "Tombs of the Kings" cannot be those of the earliest Israelite Kings is quite clear, and has not been discussed here.

In the vestibule on its southern wall is the entrance to the tomb itself, which could be shut up by a round stone in shape of a millstone rolled forwards in a groove before the opening. This arrangement is described in books, and by Sir C. W. Wilson in the Ordnance Survey "Notes," p. 66. "The longitudinal grooves" (cut in the bottom of the single tomb chambers), "a feature not seen elsewhere," was, according

[1] Ordnance Survey, Jerusalem, "Notes," p. 66.
[2] Josephus, "Antiq.," xx, 4, 3.

to my humble opinion, to take the water coming down from the moist rock in heavy winter rains, and very likely the bowl-shaped basin (or cistern) in the bottom of the vestibule had the same use, the rock on the top here being thinner, the dropping was therefore more in quantity; but it may have had at the same time the use of better concealing the entrance of the tombs, as from it the steps, the opening, the rolling-stone, and the short knee-passage could be covered by slabs, as may be seen on Elevation-Section No. 5. The grooves into which these slabs were put are still visible. When all was shut properly no stranger could imagine that there was an opening to tombs, or perceive where to look for such.

As all the tombs are on the south, it was thought an opening might also be found opposite on the northern wall, but all search was in vain. It seems that the intention to make such in course of time existed, but was never carried out. Jerusalem was destroyed, the Jews dispersed, the city became first pagan and then Christian, and so other wants and manners arose, and the former plans became neglected.

When the last modern arrangement and clearing of the place was made, and especially when the deposit of earth was removed from the large court, a good number of architectural stones and remains of sculptures were found, which I have examined and measured, and the chief of them sketched, of which I give copies on Sheets Nos. 7 and 8.

First, several stones were found which it was clear had belonged to the upper part of a pyramid, similar to that on "Absalom's pillar," or the monument, so-called, in the Kidron Valley, as shown in Fig. 1, plan and section, on Sheet 7. As there is a deepening in the centre of the top piece, this gives the proof that there was still some other top or end piece, of what figure or form we do not know. The pyramid was also much higher and stood certainly on a square base, and the whole on the top or cover of the architrave of the pillars and the rock-top. There were three pyramids, of which the middle one, corresponding to the larger entrance below, may have been somewhat larger than the others, or side ones.[1]

Fig. 2, Sheet 7, is a corner piece of the architrave, but, unfortunately, I was not able at the time to make proper drawings of the leaf work, measuring simply the mouldings. I left this also partly because they were greatly damaged.

Fig. 3 is the base of a pillar, its shaft with 17½ inches diameter at its lower end. It probably stood in the opening of the vestibule.

Fig. 4 is a similar base of a pillar, but without a square or abacus-shaped part at its foot. The diameter of the pillar belonging to this measured 21 inches. I think it is one of the four which stood in front of the vestibule entrance and the steps.

[1] These remains are mentioned in the "Jerusalem Volume of the Survey of Western Palestine," p. 405. Dr. Schick has been asked to endeavour to obtain photographs of the fragments of the pyramids, the bases of columns, capitals, and any other architectural remains that exist on the spot.—[ED.]

On Sheet 8 is given one of the capitals, as restored from the remains. According to the diameter and the width of the abacus it belonged to one of the pillars of the vestibule opening.

The capitals of the larger pillars I think may have had nearly the same shape, only thicker, not looking so tall. Of other and only small pieces, I could make nothing, but think with the aid of this one described we learn enough that an architect may with some degree of certainty reconstruct the pyramids and the whole of the decorated entrance to these celebrated royal tombs.

A GREEK INSCRIPTION FROM NEAR NAZARETH.

By Rev. H. Porter, of the Syrian Protestant College, Beirût.

April 12th, 1897.

I send a copy of a Greek inscription on a stone from the vicinity of Nazareth, which I have made from a squeeze which is not very good, as the person who took it and sent it to me is not experienced in such matters. I have made a pretty careful study of the squeeze, and am quite sure of most of the characters, but where there is doubt I have left the copy indistinct, tracing the lines of the original as they appear in the squeeze. The stone is evidently somewhat worn by time. I do not send the squeeze as I understand that the person who sent it to me (a native Syrian) wishes it returned, but should Dr. Murray find my copy undecipherable, I might get permission to forward it.

The inscription may have been published, but I cannot find it in any of the works on Greek inscriptions I have at hand.

ΗΝΜΟΥΠΑΤΗΡΚΟΙΝΤΟCΗΝΜΗΤΗΡΦΙΛΟΥC
ΤΟΔΟΥΝΟΜΕCΤΙΝΑΠΕΙΩΝΠΑΤΡΙCΔΕΜΟΥ
ΚΑΙΠΑCΙΚΟΙΝΗΓΑΔΑΡΑΧΡΗCΤΟΜΟΥCΙΑ
CΟΦΗCΔΑΦΙΠΠΟΥΕCΤΙΝΗΜΗΤΗΡΦΙΛΟΥC
ΑΠΑΙΔΑΤΟΙΚΟΝΕΓΑΙΠΩΝΕΠΙΤΡΙCΙΝ
ΟΙΚΩΚΕΛΕΥΘΟΙCΤΥΜΒΟΝΕΙCΟΜΟΥCΙΗΝ
ΠΑΤΗΡΑΠΑCΑΝΕΚΧΕΑCΜΕΗΛΘΥΠCΕΝ
ΖΗCΑΝΤΕΤΗΔΙCΕΝΔΕΚΜΟΝΘΡΕΝΗCΕΗ

Length of inscription, m. 0·75 ; width, m. 0·30.

Height of letters about 3½ cm.

Irregularity in length of lines nearly as in the original, some end-letters perhaps effaced.

Note by Dr. MURRAY.

ἦν μου πατὴρ Κόϊντος, ἦν μήτηρ Φιλοῦς,
τὸ δ' οὔνομ' ἐστὶν Ἀπείων, πατρὶς δέ μου
καὶ πασὶ κοινὴ Γάδαρα χρηστομουσία,
Σοφῆς δ' ἀφίππου ἐστὶν ἡ μήτηρ Φιλοῦς.
ἄπαιδα τ' οἶκον ἐγλίπων ἐπὶ τρισὶν
οἰκῶ κελεύθοις τύμβον· εἰς ὁμουσίην
πατὴρ ἁπάσαν ἐκχέας με ἦλθ' ὕπισθεν
ζήσαντ' ἔτη δὶς ἕνδεκ' (ἐ)μὸν θρήνησεν.

My father was Quintus, my mother was Philous,
My name is Apeion, my fatherland . . . . Gadara, fond of the Muses,
My mother Philous is of Sophè, the horseless.
Leaving a home (now) childless, I dwell in a tomb at the Three Ways.
. . . . my father came after me sorrowing.
He mourned for me who had lived twice eleven years.

At Dr. Murray's request Dr. Porter again examined the squeeze at several doubtful points, and wrote as follows :—

May 15*th*, 1897.

Your letter of the 29th ultimo, containing Dr. Murray's reading of the Greek inscription from Nazareth, is received. After carefully examining the squeeze, I am satisfied that the *και πας* of third line should be amended by the addition of an *ι* to *πας*, and I have inserted this in my copy. This will give *καὶ πᾶσι κοινὴ Γάδαρα*, which offers a tolerable reading, while the other did not. In the sixth line I can make nothing different from my original transcript, nor in the seventh. Dr. Murray's emendation of *υπεεν* to *υπισθεν* is quite likely correct, but cannot be got from the squeeze, where the *π* and *ε* are so close together that no other letter can have existed between, and though there is more space between the *ε* and *ϵ*, it is quite blank, not a trace of anything. In the last line the first letter is undoubtedly Z, and I have so marked it in my transcript. Dr. Murray's insertion of *ϵ* in *(ϵ)μον* is doubtless correct, though there is no space for it in the squeeze. His emendation of the last word is also correct, I think, as there are traces of the *ρ*, and although the letter following is clearly *ϵ*, it i probably the engraver's error, or a dialectic variation. The other words undiscovered must stand, I think, as I cannot make anything else out of the squeeze.

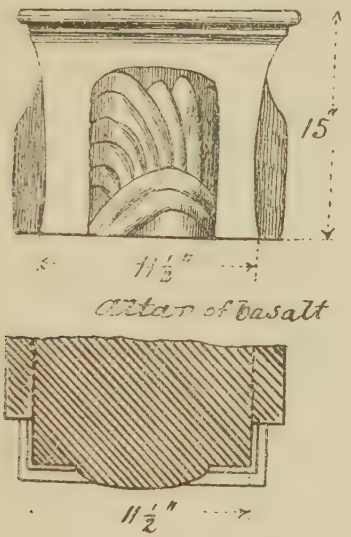
NOTES FROM JEDÛR.

By Dr. G. Schumacher.

In the country north of Haurân lies the district of Jedûr, renowned for its abundance of water and pasture fields, and especially for its well-bred, tall (long-legged) cattle, known in the market as those of S'asa'[1] or Bakr Khêsi. The north of Jedûr is hilly, the south a continuation of the Haurân plateau. In the plain of Jedûr, where the country begins to rise towards Mount Hermon, we find a very conspicuous elevation, visible throughout Haurân and even on the borders of the Syrian steppe el-Hamâd, the *Tell el-Hârra*. A recent trip through Haurân to Damascus occasioned me to explore this spot and to spend a night in the village Kh. el-Hârra. The railway train running from el-Mezeirîb to Damascus stops at el-Kuneiyeh, القنيّة, a station 36 miles south of Damascus-Midân; from here we turn due west and ride over a rolling country, covered with lava and sîar or sheepfolds; in 35 minutes we reach the village *Inkhil*, انخل, a small place numbering 55 to 60 huts, and thence strike a paved Roman road leading from el-Kuneitrah around the foot of Tell el-Hârra towards Nawa. The track along which we ride is hardly beaten, and often we were compelled to consult the shepherds watching their numerous flocks in finding our way out of the heaps of lava and mounds composed of loose stones, gathered by an ancient people who evidently once cultivated this stony but fertile spot. Several brooks were crossed until we arrived, after a good three hours' ride from the station, at the village Kh. el-Hârra. The village is built round the eastern part of a small crater lying in front of the south-eastern foot of Tell el-Hârra; between this crater and the tell itself we find a narrow, hollow plain, which is, as well as the steep slopes of the tell, cultivated. The village is the property of Mr. Selim Freige, of Beirût, and the large area of cultivated land belonging to it is administered by his agent, Yûsef Effendi Mansûr Hâtim, whose hospitality we enjoyed. The huts are built of stone, and number 126 in all, the population being about 500 souls. The fellahîn are natives from Jâzem and Zimrîn settled down among the Bedawîn; a part of the latter still camp on their old grazing fields. They are all Mohammedans, except a Christian storekeeper from Damascus, and his brother, who has opened a dry goods shop in the village, and occasionally performs the duty of a butcher. The place is healthy, but the water is filthy as usual, and must be brought from a distant spring. The climate is cool; snow falls regularly in January and February. The elevation of the village is, according to my aneroid, 3,120 feet above the Mediterranean. Kh. el-Hârra contains heaps of ancient building stones, some of which are covered with the

[1] Probably the Biblical "bulls of Bashan" were brought hence.

leading Haurân ornament : vine-leaves and grapes, wreaths and a fair representation of the local acanthus-like thistles, called Khurfêsh and Summâri. In the yard of the so-called Jâm'a I copied the following head of an altar, representing a raised feather ornament :—



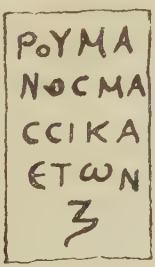
On the lintels of doors, ancient Arabic inscriptions, mostly much weathered, are seen. The following was partly legible, and seems to represent an apophthegm ; the year indicated may be 304 (?) of the Hejra :—

وكفلاه طدر وهده

صابل يا نو لدل وسلدعد الله سده بلدوا

ربع

In the dukkâneh or shop we find a Greek inscription on a basalt gravestone, measuring 3 feet by 1 foot 1 inch, now used as a pavestone, which runs thus :—



The spelling of the name of the village and tell is, el-Hârra, الحارّة, the hot, the glow-fire, and not el-Hara, الحارة, as given in the present maps of Jedûr, and may allude to the volcanic actions of the region. Between the village and the neighbouring range of volcanic hills to the west, dominated by the highest peaks of Hâmi Kursu and Tell Abu Neda, extends a fertile high plateau, intersected by lava streams and perennial brooks, the greatest part of which is claimed by the Circassian colonists who settled at Surramân, el-Breikah and el-Kuneitrah ("The Jaulân," pp. 113, 207, 243); the huge haystacks around their settlements give a proof of its fertility as pasture land. These Russian colonists do very well; the number of their villages has been increased to 18; the area of their lands under cultivation grows steadily; Kuneitrah, their head place, and residence of the Kaimakam of Jaulân, has become a populous and flourishing town; the colonists occupy most of the Government positions in the Kada of Jaulân; their young men serve in the regular army, in the Circassian regiment at Damascus, or in the "Corps de Gendarmerie" (the mounted police or zaptiehs), a detachment of which is stationed at Kuneitrah. They have improved their relations with the local Bedawîn tribes, and it is said that they even begin to intermarry; but, when the large tribes of the Syrian desert begin to overflow the high plateaus of Haurân and Jaulân in July, the Circassians must have a watchful eye on these old adversaries, to prevent their crops from being trodden down, or eaten up by the thousands of camels of the Ruwâla tribe, who linger to feed on the succulent herbs of Jaulân after a fast of eight months in the arid desert.

From the village of el-Hârra, the *Tell el Hârra* can be easily ascended. This mount belongs, as well as the neighbouring peaks, to the class of extinct volcanoes. A large crater opens on the top, the summit of which reaches an altitude of 3,660 feet above the Mediterranean, and is crowned by a simple Mohammedan shrine, the weli *'Omar esh-Shehîd*, ولي عمر الشهيد. On the western foot of the tell we find the ruins of important Arabian buildings, the *Dêr es Sâj*, دير الساج, which may originate from the Haurân kings of the Ghassanites or Jefnites; unfortunately I had not sufficient time at my disposal for a thorough exploration of these remains.

The view gained from both village and Tell el-Hârra is the finest I know in that part of the country. The wide plateau of Haurân and Jaulân lies like a map before us; in the dim south rise the mighty heights of the woody Jebel 'Ajlûn, in the east the Lejjah or Trachonitis presents itself as a flat land, slightly raised above the surrounding plain and gradually passes over to the Jebel ed-Drûz, the site of the bloody encounters of last year, and culminates in the peaks of Tell el-Klêb and Tell Jenâ; in the Haurân plain we easily distinguish the sites of Dera'ah, Sahwet el-Kameh, Tsîl Sahem ej-Jaulân, and the near Nawâ, with their characteristic old square towers, while in the far south-east we just see a black spot seated at the foot of the Druze

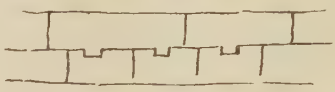
Mountains : it is the ancient metropolis, Bosra eski Shâm ; behind us, to the north, rises the majestic Hermon, our Syrian Himalayah or abode of snow. Beyond the Jordan, Mount Tabor, ed-Dahi (small Hermon) are visible, whereas the Safed and Galilee hills are hidden by the range of volcanoes near Kuneitrah. Nine miles N.W.N. we see the volcano called *Tulûl esh-Sha'âr*, and a few miles to the south-west of it the tall mŏdanet, or minaret, of *Jibâ'*, جبع, the shrine of *Sa'd ed-Dîn*, a hospice or convent (Antûsh, انتوش) for Dervishes. No explorer of northern Jedûr should miss this commanding view of Tell el-Hârra.

Shekhab, شخب.—This village is situated on the main road from el-Hârra to Damascus, about halfway between Hârra and Kisweh ; it contains 70 huts, and may have a population of 350 Mohammedan souls ; the houses are built of stone. A good spring supplies them with water. Its barometrical altitude is 2,510 feet above the sea. Over against the village we saw a small hill, also called Shekhab, which is supposed to represent the ancient site. The present village has only been founded during the last decades ; it contains several ornamented building stones and some sarcophagi ; the spring shows ancient masonry. The area of land under cultivation at Shekhab is equal to 100 feddans or 2,220 acres. Situate a few miles south of S'asa' the village *Kenâkir*, كناكر, was pointed out to us ; it is said to contain 2,000 inhabitants and many ruins. In its neighbourhood lies the village *Dêr Bukht*, دير بخت. *Tell Mer'ai* تلّ عرعي, a moderate-sized village on the high road from Shekhab and Nawâ. Unexplored.

Dêr el-'Adas دير العدس.—A large place on the same high road, about nine miles south of Shekhab ; number of huts, 110 ; population, about 500 Mohammedan souls ; altitude above sea, 2,620 feet. The village is well built, and contains many ancient remains. The Jâm'a is an old building, divided into three partitions by arches supported by four pillars ; the roof is covered and formed in the old Haurân style of architecture by basalt stone slabs. Prayer niche in the southern wall. The exterior carefully-dressed building stones contain passages from the Koran in modern Arabic and Cufic letters. Close to this mosque a second more ancient building was pointed out to me as the one to which the name Dêr el-'Adas has always been attached ; according to local tradition it represents the Kasr or residence of the Arabian Melek (King) el-'Adas. Consul Wetzstein, in his "Reisebericht" of Haurân (p. 131), mentions a Dwêr el-'Adas[1] of Christian origin, built by the Ghassanite kings, probably in the fifth or sixth century ; there is little doubt that the two places are identical, and that tradition once more is supported by historical facts. The building is a large square surrounded by native huts, the

[1] Dwêr = the diminutive of dêr, convent or castle.

royal palace is now turned into a public inn or menzûl, in which we were offered a cup of Mocha. The basalt building stones of the Kasr are carefully hewn, and show a peculiar tooth-bond in certain layers. In

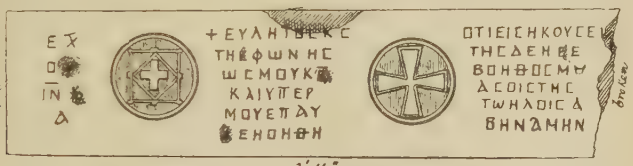


other parts of the village we came across numerous subterranean arches, covered by long slabs and other *débris*, indicating the importance of the town. The water supply is obtained from an open reservoir east of the village; the climate is healthy; the people agreeable and hospitable.

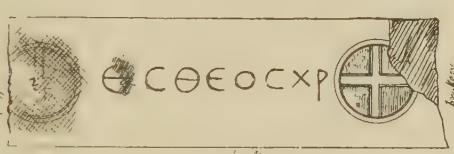
Kefr esh Shems.—Village on the same road, four miles south of Dêr el-'Adas; altitude, 2,600 feet; number of huts, 120 to 130; population, about 600 souls. Mohammedans. Many subterranean arches and other important ruins. Careful masonry, large building stones and ornamented lintels on doors and windows of two buildings, each called ed-Dêr; two rows of three and six basalt columns placed above each other and combined by arches, are still *in situ*; their column heads are Ionic and Doric; in other places several columns are combined by long, ornamented slabs of basalt. These remains belong to temples. On the spring stone of one of their arches I found the following ornamented Greek letters:—

Outside of the present village an ancient cemetery was discovered by the natives, and quantities of human bones, and gold and silver ornaments, brought to light. One and a half miles south we cross *Wady Kôm Kirieh*, وادي كوم قريه. Four miles south of K. esh Shems, along the same road, we strike the village of *Zimrîn*, زمرين, written erroneously Simlin on the maps of Haurân. Altitude, 2,550 feet; number of huts, 65; population, 300 souls. Some ruins, but evidently none of importance. Five miles and a half still southwards, we reach the largest village on our present excursion, *Jâsem*, جاسم. Altitude, 2,450 feet; number of huts, 215; population, about 1,000 souls. Several water basins, ancient remains, many Byzantine ⋊⊢⋉ and other crosses ┼ on the building stones. From Jâsem we reached the well-known village of *Nawa* in 1 hour 50 minutes slow ride. In returning from Damascus I followed the ancient "via

maris," the sultâni leading over S'asa' and Kuneitrah to the Jisr benât Y'akûb on the Jordan, and passed by the old ruin of *Nu'arân*, which I described in "The Jaulân" (pp. 63, 224). This site has now been built up, and contains some 40 huts, partly inhabited, partly again abandoned by the Bedawîn settlers. In addition to the ancient remains which I reproduced in "The Jaulân," the following Greek Christian inscriptions have been discovered on lintels (Nu'arân, Basalt) of doors on one of the main grain stores :—



3'11"



5'3"

Other buildings contain numerous crosses and leaf ornaments. The inhabitants are continuously excavating in the hope of finding treasures, but have so far not been very successful. The villagers of Fîk in Jaulân have had more success : they excavate around the hill of Sûsiyeh, the ancient Susitha of Talmud, at Kal'at el-Husn, and Fîk itself, and have brought baskets full of Roman gold, silver, and copper ornaments and coins to daylight, heaps of copper and bronze tools, ancient glass and pretty gems, and are doing a regular trade with merchants from Saida and Beirût. Some of the specimens of golden bracelets, earrings, chains, &c., shown to me are really handsome and valuable.

Jisr benât Y'akub.—Whilst at Safed I was informed by the learned Kâdi there, a native of Safed and a member of the distinguished family of *en Nahawy*, that the expression "*benât*" was a late corruption of the original spelling *benâ*, ابنا, or *ibnâ Y'akûb*, the sons of Jacob. This statement was confirmed to me by a rabbi of Safed, who added that Jacob only having one daughter, Dinah, the spelling *benâ* instead of *benât* (daughters) was surely the original.

HAIFA, *January—March*, 1897.

THE WATER OF JACOB'S WELL.

By Dr. Henry J. Bailey.

The subject of Jacob's Well is without doubt one of the most interesting we could have to deal with, for not only is the well itself one of the few undisputed sites in the Holy Land, but "on the brink of Jacob's Well we may stand in the very footprints of Christ" ("Twenty-one Years' Work in the Holy Land," p. 99).

In this same most interesting little volume, a veritable *multum in parvo*, we have the axiom laid down by Colonel Conder:—"When the traditions of Jew, Christian, and Moslem unite, there is strong presumption for believing that they are right. . . . . No one doubts, for instance, the site of Hebron, Rachel's Tomb, and Jacob's Well." In the case of the Jacob's Well we might add that Samaritan tradition confirms the authenticity of this site, and may well be considered of the highest value, for the Samaritan community has ever clung to the locality where once their Sacred Temple stood, and to this day survives there and there alone. I am not, therefore, surprised that my notes on the quality of the water in Jacob's Well should have called forth some further suggestions upon the subject dealt with. With regard to the first of these in the January number of the *Quarterly Statement*, in which Dr. Turnbull, of Philadelphia, suggests that the woman came to the well to draw water for the toilers in the fields near by, I think this explanation of her presence there, and *at that hour*, a likely one. The early morning and evening are the usual times of resort to springs and wells for water supply, as being the times when the atmosphere is coolest for the conveyance of water (always kept cool with scrupulous care in the East), and the times when flocks and herds are watered.

Jacob's Well at the time of our Lord had long ceased to be a *necessity*, as during the times and under the circumstances in which its cautious and diplomatic founder caused it to be excavated. It would not in our Lord's time be very generally used, and if the woman came, as was suggested in my notes, to supply water for some richer persons, she would have come at the usual hours. Her presence there during the heat of the day was for some special purpose, and the supply of water to workers in the adjoining fields is a likely supposition, especially on the grounds of her being poor and dependent upon the labour of carrying water for her livelihood.

The second letter, in the same number of the *Quarterly Statement*, in which Dr. Masterman suggests the *sacred* character of the well as forming the sole reason of her presence there, I need, perhaps, scarcely point out is the usual and most natural theory, and the one mentioned

by many writers when referring to this subject. My notes as to the quality of the water in the well were given, not in dispute of this usually accepted theory, but as an interesting tradition, based upon apparently good grounds, confirming the truth of the Gospel narrative of the presence of a woman at the well at an unusual hour and for a purpose not easily appreciated, when the distance from her home and the presence of a fountain of *living* water at her very door is taken into account.

That there is an *essential* difference in the quality of the water of this well as compared with the usual supply from the numerous springs surrounding it there cannot be a doubt. In the valuable little volume mentioned above I find (p. 197), Mr. Mills, in his "Three Months' Residence at Nablus," quoted as observing, "that the well is not an *'ain*, a well of living water, but a *ber*, a cistern to hold rain water." The observations of various writers confirm this view, which well accords with the fact that for many years comparatively little water found its way into the well, as the surrounding surface has been neglected and in a ruinous state. An examination of the spot shows that the *true* mouth of the well is some distance below the surrounding surface, and was made in such a position as to ensure a large quantity of rain water finding its way into the well. The Greek custodians have lately cleared the surroundings and mouth of the well, and the immediate result, in spite of the many feet of accumulated rubbish in the well itself, is a far better and more constant supply of water. There can, therefore, be little doubt that rain water plays a large part in the supply of this well, and that the keen and accurate perceptions of the natives have long detected an *essential* difference in the quality of the water as compared with the surrounding springs.

I have no wish to weaken the arguments as to the *sacred* character of the water proving the cause of the woman's presence at the well, but would suggest, as another explanation, that she might have resorted thither during the heat of the day to supply the wants of passing travellers, who, after all, were the only likely customers for *sacred* waters. We do not find that residents usually duly appreciate the sacred waters so easily within their reach unless for some *essential* goodness!

In conclusion, I may say that the "simple explanation" of the *actual fact* of the well in that situation, as offered by Dr. Masterman, is the one and only explanation, and is given as such by many writers. Both of his suggestions have therefore been anticipated by others, *e.g.*, in the "Land of Israel," Canon Tristram remarks:—"How truly in keeping with Jacob's peace-loving character was this act of sinking a well in the plain at such an enormous cost, so near the city and its abundant springs and rills; fearing lest his sons should be brought into collision with the men of Shechem concerning that water which was far more precious than land"; and in "Tent Work in Palestine," p. 38, Colonel Conder says:—"By digging the well Jacob avoided those quarrels from which his father had suffered in the Philistine country, pursuing a policy of peace which appears generally to have distinguished his actions"; and

in Thompson's "Land and the Book," the same explanation is given in yet minuter detail.[1]

Bishopstoke, Hants,
May 15th, 1897.

THE DAMASCUS RAILWAYS.

By Dr. E. W. G. Masterman.

For some two years now, two railways have been in regular working order connected with Damascus. These are the Beirût-Damascus and the Beirût-Mezerîb (Hauran) lines. Though these two lines were constructed by different companies, the former by a French and the latter by a Belgian company, they have from their opening been amalgamated under the French company known as "Chemins de fer de Beyrouth-Damas-Hauran et Beredjik sur l'Euphrate." The extension to Beredjik, it is scarcely needless to remark, is not yet begun. Both railways consist of a single line on the one metre gauge and the plant is common to both. The large station at the *Meidan* end of Damascus is the starting place for trains to both Mezerîb and Beirût.

[1] [The Rev. Alexander A. Body, on p. 80 of his "Christ in His Holy Land," published by the S.P.C.K. in 1897, has the following remarks on this subject:—

"With Selim el Gòmri, the Syrian Deacon of Nâblus, I sat on the same Jacob's Well. We looked down into its depths, and then we lowered some lighted candles on a small frame; as they slowly descended they lit up the old stones placed there in the days of the Patriarch, and which actually were there when Jesus rested here. These very stones heard His sweet voice. 'You might wonder,' said Selim, 'why Jacob made a well here, when already there were so many springs of water in this neighbourhood. It was, I think, that he might avoid strife between his herdsmen and the men of Shechem. This would be his own well, and so none could complain.'

"'Will you tell me,' I said to this Deacon of Nâblus, 'why the Samaritan woman came to this well, and why she came at mid-day.'

"'I think that she was at work in the fields here. She would bring out from home in the morning some food for her dinner, and also her small jar and a long, light piece of rope. At noon she would leave her weeding for awhile and come here to drink this water, on which she may have set some special value of a medicinal or superstitious character. She belonged, I think, to El Askar, that village at the foot of Mount Ebal over yonder. That is where Sychar is said to have stood in those days.' (It is thought by some that this well (or pit) was chiefly a store for surface water, and that it contained softer water than could be found in the abounding springs of this Shechem vale)."—Ed.]

The *Beirût-Damascus* line, commenced in 1891, is 147 kilometres long and has, including the termini, 25 stations. The quickest trains take a little over nine hours. The first section between *Beirût* and *Mu'alakeh-Zahleh*, though only 56 kilometres long, includes by far the greater part of the engineering difficulties. Over a great part of this section, both in ascending and descending the Lebanon, the cog-wheel system known as the Aptor is used. That is, there is a rack in the middle of the permanent way composed of a double row of solid cast steel cogs into which the cogged wheels on the engine play. It is, I believe, the same system as that employed on the newly-opened Snowdon Railway. The sleepers throughout are of iron. Ascending the Lebanon with an average incline of 1 in 22·5, the line rises to a height of 4,877 feet, the steepest parts having an incline of 1 in 14. At *'Areyah* and also at *'Aleih* difficult curves are avoided by running the train into a terminus and reversing the engine to the other end. At the steepest parts just before *'Areyah* and also at two points near the summit there are short tunnels. As the train commences to descend the eastern sides of the Lebanon, a magnificent panorama of the Buka'a opens before the traveller, with the Anti-Lebanon to the east and Hermon to the south. At *Mu'alakeh* a halt of half an hour is made for lunch, which is served in the railway station in a satisfactory and expeditious way. From here onwards the line is an ordinary track, and an ordinary engine takes the train on while the special mountain engine returns, taking the train from Damascus. The heights of the Anti-Lebanon are avoided by turning to the north-west and making a detour through the narrow and tortuous *Wady Yahfûfeh*, and then turning south along the *Zebdaney* Plain. After the Wady Yahfûfeh a great increase in speed is possible, and the last 60 kilometres is done in two hours and twenty minutes. At the end of the *Zebdaney* Plain the train turns into the winding *Wady Barada*, where the rapid pace, combined with the frequent curves and the narrow gauge, often causes a disagreeable amount of rocking motion.

The route of the railway is exceedingly picturesque—much more so than the old *diligence* road. For the antiquarian the chief points of interest are the remains of the old Roman road with the Latin inscriptions, as well as the ancient tombs to be seen from the train as it passes the ancient site of Arbela just west of the present *Suk Wady Barada* station.

There are two services of passenger trains each way in the 24 hours: day trains leaving both termini at about 7, crossing at Mu'alakeh at noon and reaching their destinations about 4.30, and night trains carrying the mails and going somewhat slower. There are also two goods trains each way daily. There are three classes, the fares for the whole journey being about 20, 12, and 8 shillings respectively. The first class is provided with well-padded carriage equal to the first class on many Continental railways.

Stations between Beirût and Damascus.

Beirût.	Yahfûfeh.
Hadeth.	Zurghâya.
Babdeh.	Zebdâny.
Jamûr.	El-Téquieh.
'Areiyah.	S.-W.-Barada.
'Aleih.	Deir-Kanûn.
Bhamdûn.	'Ain-Fijeh.
Ain-Sôfar.	Judeideh.
Mereijat.	Hamy.
Jedita-Shtora.	Dummar.
Saïd-Naïl.	Damascus-Beramké.
Mu'alakeh-Zahleh.	,, Meidan.
Reyak.	

The *Damascus-Hauran* Railway, which has been quite lately wrongly described as a "tramway," was completed and opened for traffic several months before the Beirût one. The construction of this line presented few engineering difficulties, as after crossing the low shoulder of the *Jebel el Aswad* and bridging the River *'Awaj* (the so-called Pharpar), the track is laid on the almost level plain of *Hauran*. The line is 101 kilometres long, and the whole journey is performed in a little over 3½ hours. The train leaves Damascus at 7 A.M., reaches Mezerîb at 10.55, and leaves again for Damascus at 1 P.M.

In point of picturesqueness this line is not to be compared with the Beirût-Damascus railway, but it is full of interest to the student of the country. The great corn-growing Hauran, with its wonderful black basaltic cities, is now easy of access to all, and the half-way station, *Sunamein*, is an excellent specimen of these misnamed "Giant Cities of Bashan."

Stations on the Damascus and Hauran Line.

Damascus.	Ghabâgheb.
Daraya.	Sunamein.
Sahnaya.	Kuneiyeh.
Kesweh.	Sheikh-Miskîn.
Khan-Denûn.	Dail.
Zêrakiê.	Mezeirîb.

The management of these railways is, on the whole, good—the passenger service remarkably so. The trains run punctually, no severe accidents have occurred, and the officials are usually polite. Their smart uniform forms a striking contrast to the slender and ragged clothing of their neighbours, especially in the Hauran; though for the matter of that, this contrast is nothing compared with that afforded by the modern red-tiled-roofed station-houses standing in close proximity to the ruins of Hauran's ancient civilisations.

THE LENGTH OF THE JEWISH CUBIT.

By Colonel C. M. Watson, C.M.G., R.E.

The exact length of the cubit which was used by the Jews in the construction of the Temple is a problem which has given rise to much discussion and, up to the present time, it cannot be regarded as definitely fixed. Some writers consider that they have solved the difficulty, each of whom asserts confidently that the length as calculated by him must be the correct one. Unfortunately, however, the conclusions arrived at are not in accordance with one another, the lengths given varying from about 16 to 21 inches. I think, therefore, that any additional light which can be thrown upon the question may be of interest to those who wish to arrive at some definite result, and there is one method of investigation which appears to me not to have received the attention that it deserves.

This is the system of barleycorn measurement upon which, among the Jews and certain other Semitic peoples, the fixing of a standard measure was based. It is generally acknowledged that the ordinary cubit used by the Jews was one composed of 6 handbreadths or palms, each palm of 4 fingerbreadths or digits, and each digit of 6 grains of barley placed side by side so as just to touch one another. The whole cubit was, therefore, equal to 144 barleycorns thus placed. This cubit is identical with the sacred cubit of the Mohammedans both as to the total number of barleycorns contained in it and as to the different subdivisions, so that the origin, whatever it may have been, was probably the same.

Having been unable to find in any work upon the subject that the length of the cubit, as based upon the width of the barleycorn, had been carefully investigated, I procured some ordinary Syrian barley from Jerusalem, and, having cleared it of husks, made a scale of the grains, about 30 inches in total length. The grains were placed exactly touching each other with the axes parallel, and were glued down so as to remain perfectly firm, and thus enable careful and repeated measurements to be taken. To facilitate this the wooden scale in which they were fixed was grooved, the groove being equal in width to the length of a barleycorn, and in depth to the thickness of the grain. The actual length of the groove was 30·03 inches, which just contained 243 grains of barley placed side by side as described. The measurements were taken to one hundredth of an inch and gave the following results :—

Taking the whole length of the scale, 243 grains gave a length of 30·03 inches, which gave for the cubit of 144 grains a length of 17·79 inches.

The length of 144 grains, measuring from one end of the scale, gave a cubit of 17·76 inches. The same from the other end of the scale gave a cubit of 17·78 inches. The mean of these three gave a cubit of 17·777 inches.

Although the breadth of the grains of barley was very uniform, yet there were small differences, so that it appeared desirable to measure handbreadth by handbreadth in order to arrive at an average result. The length of the scale being 30·33 inches, there were rather more than 10 handbreadths in it. The following gives the result of the measurement of these consecutively :—

1st	handbreadth	....	....	....	....	2·96 inches.
2nd	„	....	....	....	....	3·03 „
3rd	„	....	....	....	....	2·88 „
4th	„	....	....	....	....	2·99 „
5th	„	....	....	....	....	2·91 „
6th	„	....	....	....	....	2·99 „
7th	„	....	....	....	....	3·05 „
8th	„	....	....	....	....	2·90 „
9th	„	....	....	....	....	3·03 „
10th	„	....	....	....	....	2·89 „

Giving a mean handbreadth of 2·963 inches.

A cubit of six such handbreadths is 17·778 inches, which is probably as accurate a determination of the Jewish cubit as can be arrived at by the measurement of modern Syrian barley. It would, of course, have been satisfactory if, in place of using the barley from Jerusalem of to-day, it had been possible to make the scale from barley grown in Palestine 2,000 years ago, as the size of the barleycorns may have altered somewhat, though probably not to any great extent. Although it is not practicable, so far as I know, to obtain ancient Syrian barley, we can procure Egyptian barley of great age, on account of the custom of placing corn in the cases of mummies, and I thought that it would be of interest to compare the measurement of the cubit, as derived from this mummy barley with that obtained from the modern Syrian barley. Professor Flinders Petrie was kind enough to supply me with a sample of this mummy barley taken from a tomb at Hawara in Egypt, probably dating from the third century of the Christian era. This barley is dark in colour and exceedingly dry. When the husk is removed the grains appear somewhat shrivelled, and are with little doubt rather less in diameter than when originally gathered. Otherwise, in shape and appearance they are very like the modern Syrian barley. With the mummy barley I constructed a scale in the same manner as that already described, and found that 144 barleycorns gave a length of 16·96 inches.

As the grains have shrunk owing to their age and dryness, this cannot be regarded as a positive result, and only proves that a cubit based upon this barley could not have been less than 16·96 inches in length. It is evidently important therefore to arrive at some conclusion as to what the amount of shrinkage probably has been, in order to compare this with the length of cubit as deduced from the modern barley.

There is one way by which we can obtain an approximation to the amount of the shrinkage, namely, by making a comparison with the

length of the Egyptian cubit, of which there have been many determinations, and these, though not exactly the same, agree fairly well with each other. Here, for example, are some of them, with the authorities for each :—

Name of Cubit.	Authority.	Length in Inches.
Nilometer of Elephantine	Wilkinson	20·6250
The same	Jomard	20·7484
A cubit of Thebes	Harris	20·6500
Cubit of the Pyramids	Petrie	20·6320
The Egyptian cubit	Perrot et Chipiez	20·6697
A cubit from Memphis	Jomard	20·4729
A cubit in the Turin Museum	Wilkinson	20·5730
The same	Jomard	20·5786
Another	„	20·6180
Another	„	20·6584

The mean value of these is 20·6226 inches, which is probably not far from the length of the Egyptian cubit. Many more determinations could be given, which are nearly all between 20·5 and 20·8 inches, and do not contradict the above. This cubit was 7 handbreadths in length, and if we assume that the handbreadth was the same as that of the Jewish cubit, it would be equal to 168 barleycorns.

On the scale made with the mummy barley, 168 barleycorns are equal to 19·66 inches. If we assume that the amount of shrinkage is uniform throughout, allowing for the same proportion, the cubit of 144 grains would be 17·790 instead of 16·96 inches, a result which agrees fairly well with that of 17·778 inches, as obtained from the measurement of modern Syrian barley.

The final result that we arrive at, therefore, is that the Jewish cubit of 6 handbreadths was between 16·96 and 17·79 inches in length, and was probably much nearer to the latter than the former measurement. This confirms the conclusion, based on wholly different considerations, that the cubit was about 17·70 inches. The cubit scale based on this length is as follows :—

				Inches.
1 barleycorn	....			0·123
6 barleycorns =	1 digit			0·737
24 „ =	4 digits =	1 palm		2·950
144 „ =	24 „ =	6 palms =	1 cubit	17·700

The Egyptian cubit of 7 handbreadths, based on the same scale, would be 20·65 inches, which agrees very well with the length of the same cubit as derived from measurements of the Egyptian monuments.

It is worthy of note that the barleycorn, as a unit of measure, gives a more accurate and uniform result than might have been anticipated. It is, indeed, doubtful whether any other natural objects could have been selected by which anyone could make his own measure without difficulty, while measures so made would vary from each other to a very small extent.

DATE OF THE SILOAM TEXT.

By Lieut.-Colonel C. R. Conder, LL.D., R.E.

Mr. E. J. Pilcher has contributed to the Proceedings of the Biblical Archæological Society a paper on the date of the Siloam text (May 4th, 1897), in which he argues that it should be placed as late as the time of Herod the Great The reasons are interesting, but I venture to think that they are not sufficient to upset the generally received opinion, first given by Dr. Isaac Taylor, and now apparently accepted by Professor Sayce, though in 1883 he ascribed this text to the time of Solomon. The argument is based on the well-known peculiarities of form in certain letters (especially the *Aleph* and *Tsade*), which distinguish the Siloam text from those of Phœnicia and Syria, and which occur later in Samaritan, and on Jewish coins. He also compares the forms found on the seal of Haggai ben Shebniah, which he attributes to the time of Herod because found at the base of the Temple wall. This seal, however, does not give us any of the most characteristic Siloam letters except the *Nun*.

In speaking of the forms of the Siloam letters I do not depend on published copies, or even on the cast which Dr. Schick made for me, but on my own study of the original inscription. In speaking of the Samala texts I depend on the excellent photographs published in Germany, and for Phœnician letters on casts, photographs, and squeezes. I venture, therefore, in the first place, to say that I do not think Mr. Pilcher's representation of the *Koph* of the Siloam text is absolutely correct, while his table gives no idea of the peculiar elongated forms of the later Phœnician or of some of the forms at Samala ; but with these exceptions it is correct and valuable.

Exception must also be taken to his conjectural additions to the column for the seal of Haggai, since these somewhat prejudice the comparison, and again to the column of coins of Barcochebas, and to the attribution of coins of "Eleazar the Priest" to the same age. The so-called coins of Barcochebas, bearing the name Simon and struck on Roman denarii, were regarded by Renan as forgeries, and the evidence appears to me to favour this view. It is not known that Barcochebas was named Simon, nor does the name Barcochebas occur on these coins at all.

As regards Eleazar, that name was common among high priests, and the only reason for placing these coins so late appears to be that they represent a palm tree, supposed to be "copied" from coins of Procurators. It is quite as likely that the Procurators copied this ancient and widely-used form from earlier Jewish coins. We must, therefore, discard the evidence of these coins, and also that of the Hebrew signets, since there are no means of dating the latter, and, although they are in the alphabet of the Siloam text, none of them contain the crucial letters *Aleph* and *Tsade*.

	Moabite Stone. 900 B.C.	Baal Lebanon. 800 B.C.	Samala. I.	Samala. II. 730 B.C.	Lion Weights. 745–680 B.C.	Siloam Text. 700 B.C.
א	𐤀	𐤀	𐤀	𐤀	𐤀	𐤀
ב	𐤁	𐤁	𐤁	𐤁	𐤁	𐤁
ג	𐤂	𐤂	𐤂	𐤂	𐤂	𐤂
ד	𐤃	𐤃	𐤃	𐤃	𐤃	𐤃
ה	𐤄	𐤄	𐤄	𐤄	𐤄	𐤄
ו	𐤅	𐤅	𐤅	𐤅	𐤅	𐤅
ז	𐤆	𐤆	𐤆	𐤆	𐤆	𐤆
ח	𐤇	𐤇	𐤇	𐤇	𐤇	𐤇
ט	𐤈	𐤈	𐤈	𐤈	𐤈	𐤈
י	𐤉	𐤉	𐤉	𐤉	𐤉	𐤉
כ	𐤊	𐤊	𐤊	𐤊	𐤊	𐤊
ל	𐤋	𐤋	𐤋	𐤋	𐤋	𐤋
מ	𐤌	𐤌	𐤌	𐤌	𐤌	𐤌
נ	𐤍	𐤍	𐤍	𐤍	𐤍	𐤍
ס	𐤎	𐤎	𐤎	𐤎	𐤎	𐤎
ע	𐤏	𐤏	𐤏	𐤏	𐤏	𐤏
פ	𐤐	𐤐	𐤐	𐤐	𐤐	𐤐
צ	𐤑	𐤑	𐤑	𐤑	𐤑	𐤑
ק	𐤒	𐤒	𐤒	𐤒	𐤒	𐤒
ר	𐤓	𐤓	𐤓	𐤓	𐤓	𐤓
ש	𐤔	𐤔	𐤔	𐤔	𐤔	𐤔
ת	𐤕	𐤕	𐤕	𐤕	𐤕	𐤕

Gebal.
600–400 B.C.
Eshmunazar.
300–250 B.C.
Hyrcanus.
135–78 B.C.
Jannæus.
78–40 B.C.
Antigonus.
40–37 B.C.
Silver Shekels.
400 B.C.?
Early Samaritan
330 B.C.

The materials remaining for comparison with the Siloam text, on which we can rely for date, are, therefore :—

1st.	The Moabite Stone	about 900 B.C.
2nd.	Baal Libnan Text	„ 800 „
3rd.	Samala Text I	.... 800 „
4th.	„ „ II	.... 730 „
5th.	The Lion Weights from Nineveh	745–681 „
6th.	Gebal (Yekhu Melek)	600–400 „
7th.	Eshmunazar's Text	300–250 „
8th.	Coins of Hyrcanus and Aristobulus	135–78 „
9th.	„ Jannæus	78–40 „
10th.	„ Antigonus	40–37 „

The date of the silver shekels is so uncertain that it can only guide us approximately, as not earlier than 430 B.C. The earliest Samaritan text at Shechem is very late, belonging to the sixth century A.D., and the forms, though recognisable, are so much modified that they have little bearing on the question.

Of the above sources the first two are not given in Mr. Pilcher's tables. For convenience of reference a table is here added of the alphabets in question. It seems to me that anyone comparing the columns would say that the Siloam text stands in its right place, about 700 B.C., and can hardly be much earlier or much later. Omitting letters which are very constant and not distinctive we find—

Aleph. Is the germ whence the late Hasmonean letter arose, and the more exaggerated Samaritan.

Vau. The Jerusalem form occurs as early as the eighth century on the lion weights, but not earlier.

Zain. Probably preserves a very early form, and resembles the Moabite—not the later Phœnician.

Caph. Has a very early form, and not that of later times.

Lam. Has an early form, not that of later times.

Mim. Resembles that on the Hebrew seal of Azayu ben Yokim.

Nun. The same. The later forms approach nearer to square Hebrew.

Ain. Is found not completely round as early as the Baal Lebanon text.

Pe. Is nearest to the Moabite Stone.

Tsade. Is certainly the germ of the form found on the Shekels, but it could not be considered later than these. The Samaritan is much modified.

Koph. Presents an earlier form than that of Samala in 730 B.C., or than the later Phœnician letter.

Shin. Has the original form, not that of later times.

Tau. Resembles the Moabite Stone and not the later forms.

It is therefore only in the cases of *Aleph*, *Vau*, *Mim*, *Nun*, *Ain*, and *Tsade*, that the Siloam text differs from the oldest forms of the Moabite Stone, and in these cases we are able to trace the Siloam forms (excepting *Aleph* and *Tsade*)—

Vau	....	....	....	to 8th	century	B.C.
Mim	....	....	....	7th or 5th	„	„
Nun	....	....	....	7th or 5th	„	„
Ain	....	....	....	.... 9th	„	„

The *Aleph* and *Tsade* are certainly older than the forms of the Shekel coinage, or of Antigonus's coins. It is but natural that the late Jewish letters should resemble the old alphabet of Israel, but if the forms of *Caph*, *Lam*, and *Nun*, on the coins of Antigonus, be compared with the Siloam letters, the superior antiquity of the latter will be seen, whereas Mr. Pilcher supposes the Siloam text to have been written some 60 years later.

Several other points may be noted in this interesting paper. The Siloam tunnel is ascribed to Hezekiah, not solely because in 2 Kings xx, 20, he is said to have "made a conduit," but because in 2 Chron. xxxii, 30, the tunnel is described as leading from Gihon in the *Nakhal*, or Kidron ravine. It has never been proved that there was a second tunnel to Gihon; and, as I have before pointed out, the levels of the aqueduct found by Mr. Schick do not agree with such a supposition.

It is not probable that a civil memorial in Herod's time would have been written in classical Hebrew. The later Aramaic was then the spoken language, and even in Ezra's time Hebrew was not commonly understood.

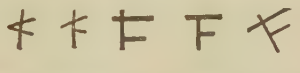
Mr. Pilcher attributes the square Hebrew text of the Beni Hezir tomb to the fourth century A.D., but the monument is not in the architectural style of tombs or buildings of that age. This text is generally referred to the Herodian age, and shows us a very different alphabet to that of Siloam, but one earlier than that of Palmyra in 200 A.D. He does not refer to the inscribed coffin of Queen Sarah (Helena of Adiabene), belonging also to the Herodian period, but inscribed in much later forms than those of the Siloam inscription.

The capital found at 'Amwâs, and which, both in character and from the form of the Greek letters, cannot be dated earlier than about the fourth century A.D., has on it a Hebrew text, which M. Clermont-Ganneau is said to regard as being in the "old Hebrew character." He probably only means that it is not square Hebrew. If we compare its letters with those at Siloam, and with later forms (supposing the copy to be exact) it will hardly, I think, be concluded that they cast much light on the date of the Siloam text:—

	Siloam.	Amwas.	Coins.	Early Samaritan.
Beth				
Vau				
Caph				
Lam				
Mim				
Ain				
Resh				
Shin				

The conclusion which appears to me clear from this comparison is, that the 'Amwâs capital is written in a very late character, probably by a Samaritan of the fourth century A.D., but that it is earlier than the Samaritan of the sixth century A.D., in the right hand column.

It has already been suggested by Mr. Davis, I think, that the form of the Siloam *Aleph* (like that of the Samala *Koph*) was due to the difficulty of cutting the older form. The transition was apparently as below—



shown between the tenth century B.C., and the sixth century A.D. The Jerusalem letter stands early in the history of this modification.

It has also been pointed out that the form of the Siloam *Zain* is probably very archaic, and certainly older than the Z form which is traced in North Syria to 730 B.C.

The origin of the Siloam *Tsade* is less easy to understand, but it is possibly a variation of an original form of which we have no example, but whence the Phœnician and the Israelite letters branched off.

Mr. Pilcher supposes that the upper part of the tablet at Siloam was intended for a bilingual text. As, however, this was never written it affords us no evidence. If such was the intention it might have been written in Cuneiform, and not in Greek.

These considerations appear to me to militate against the new proposal and to confirm the usual date for the Siloam text, about 700 B.C.

The seal just found on Ophel by Dr. Bliss cannot be used for comparison, being undated, but appears to me to date about 450 B.C., or from the time of Ezra.

NOTE ON PIERRE BELON'S TRAVELS.

By Lieut.-Colonel CONDER, LL.D., R.E.

MR. WILLOUGHBY GARDNER having kindly lent me a book which I have never seen noticed elsewhere, an abstract is here given of the part referring to Palestine. Pierre Belon du Mans travelled in 1553, with the French Ambassador to Turkey—M. de Furet, in Egypt, Sinai, Palestine, Syria, and Asia Minor. His account comes between that of Breydenbach in 1483, and that of Quaresmius in 1616. Palestine was under the Turks, who conquered it in 1518, and the writer was a remarkably zealous observer of manners and customs, natural history, and other subjects not treated by the ordinary pilgrim. The volume of 422 pages, printed at Paris in 1555, contains numerous rough woodcuts of animals, plants, costumes, with a bird's eye view of Sinai.

Starting from Cairo the party encamped at the Twelve Bitter Springs of Moses (*'Ayûn Mûsa*) and followed the usual route to Pharagon (*Wâdy Feirân*) where they found three or four huts of palm branches, and thence by a rocky ascent with steps, reached the foot of Sinai. There were sixty monks, who entertained travellers both Christian and Moslem, and a small mosque is said to have existed inside the monastery, east of the Chapel of St. Catherine. The mountain is said to have three peaks: Horeb, on the top of which is a Chapel of St. Catherine; Sinai, with the rock stricken by Moses; and the Mount of Moses to the east. On the west was a site called Quaranta Padri (Forty Fathers). At the village of Tor on the coast was a small fort with four towers, and near it were forty palms. Jews and Christians—Greek, Arab, and Armenian—lived here, and the Christians are said to have lent one another crosses and vestments for mass. At Suez were forty galleys, sent from Constantinople and taken in pieces for transport from Cairo. Belon was shown embalmed bodies of flying serpents with two legs and wings (probably manufactured) said to live in the desert.

Gaza was reached early in November, and is described as having an old square castle, but no walls. Figs, olives, jujubes, and apples, pomegranates, vines, and a few palms grew here, and sugar canes were cultivated. At Ramleh the ruins, vaults, and cisterns are noticed, and the land was tilled for corn, barley, and vegetables, with a few vines. The terracing of the hills is ascribed to the ancient Jews.

Jerusalem was reached on November 8th, ten days after leaving Cairo. On the way from Ramleh a ruined church with Latin pictures is noticed (probably at *Kuriet el 'Anab*). On Sion were some thirty

Franciscans. Their church (*Neby Dâûd*) had been taken as a mosque, but restored to them through the remonstrances of M. d'Aramont, the French Ambassador at Constantinople. The account of the holy places is very short. The walls of the city are said to be modern (they had been built, as known from their inscriptions, by Soliman I, in 1542). From Sion, by the Gallicantus Chapel, the visitors went over Kedron to Bethany, where the tomb of Lazarus was in a small vault (as now shown). Thence by Bethphage, and the place where Christ mounted the ass, they went to the top of Olivet, and descended by the Agony Chapel, and Virgin's Tomb, and Gethsemane. The two pyramidal tombs in the Kedron are attributed to Jeremiah and Isaiah (now Absolom's and Zechariah's tombs) ; the stoning of Stephen was placed near the Golden Gate, which was closed. Bethesda is said to drain into the Kedron (at the *Birket Israîl*). The Holy Sepulchre Church is described, with its roof open above. The price of admission was 9 ducats each, and the farmer of this tax paid 8,000 ducats a year to the Sultan.

The Plain of Jericho was next visited. A tower existed at Jericho. After describing shortly the Dead Sea and Jordan, 'Ain es Sultan is said (wrongly) to be Callirrhoe, and the ascent of Quarantania follows, with notice of the caves and chapel on the summit. Returning to Jerusalem the party went to Bethlehem : the "Field of Peas" (a common legend still surviving near *Mâr Eliâs*) is noticed on the way. The church is briefly noticed, and thence the way led to Hebron, where a mosque existed over the tombs of Adam, Abraham, and Isaac. Christians might not enter, but could look through a hole in the outer wall—probably that still shown near the south steps of the Haram, though it does not now give any view of the cave inside. The Field of Red Earth and Abraham's Oak are noticed, and on the return journey the "Sealed Fountain" and the birthplace of St. John the Baptist (at *'Ain Karim*) are just mentioned.

From Jerusalem the party went north, and camped at Bîreh. On the way they found sesame and cotton cultivated. Passing by Jacob's Well to Nâblus, mention is made of the gardens of white mulberries, fruits, and olives, and of the trade in cochineal with Venice.

A picture of a Syrian peasant is given, and the dress described. The hat was high, and apparently of goatskin, with a turban (the Jews wore yellow, the Christians blue, Moslems white and green). The abba of black and white left the right arm bare for facility in drawing the bow, which appears to have been of horn. The shirt, with large, long sleeves, was confined by a broad leather belt, in which was a dagger. The figure also carries a shield (probably of leather), a quiver, and a sword. The shoes came to the ankles. The general effect reminds one of some of the Assyrian bas-reliefs.

From Nâblus to Nazareth occupied only one day's ride, and the Chapel of the Annunciation was visited. Thence they descended to Capernaum, where were five fountains of water, and by Bethsaida and Corozaim (*Kerâzeh*) reached the Jordan Bridge (*Jisr Benât Y'akûb*), where they

fought the Arabs. The Jews had settled on the north shores of the Sea of Galilee, and had recently established fisheries. They remained at a Khân beyond the bridge, and crossed the Jaulân to Damascus, which was reached in six days from Jerusalem.

At Damascus was a Venetian Baillie or Consul, and Venetian artisans. The city had double walls, iron-bound gates, fine bazaars, and gardens. On the walls were carved two fleur-de-lis and a lion, which were supposed to be Frankish arms, but the Franks never held Damascus. There were many square and round towers close together. Silkworms were fed on the white mulberries. Cotton was carded. Many Jews lived in a separate quarter, and Greeks and Armenians in all parts. The departure of the Hâj was witnessed; and the portrait of a gentleman on a horse is given. The horse is adorned with a yak's tail on the neck: the rider has a high turban and furred robe. The raisins (*Zebîb*), the Damascened steel and brass work of the city, are noticed as highly prized.

From Damascus they proceeded to Calcous (Chalchis, in the Buka'ah Plain) and to Baalbek, where were Jewish inhabitants. Nine pillars of great size are mentioned in the citadel, and another in the plain (still standing north-west of Baalbek). A fight with the Arabs followed near Lubon, where were Roman ruins; several of the travellers were wounded, and made only a short journey north on this day. The decay of agriculture is attributed to the people being slaves of the Turks, but the country was well watered, and had many villages; and silk was made. At Lubon elms and walnut trees are noticed.

Homs was next reached, and an ancient masonry tomb (still standing) is mentioned outside the city, with a Greek epitaph of Caius Cæsar. The walls were standing, and the town had gardens of mulberries for silkworms, and figs. Hamah was next reached, and is wrongly identified with Tarsus. The ruins of a Church of St. John are noticed, and a stone bridge, and the water-wheels for which Hamah is still notable. Sesame, cotton, walnuts, and other fruits were found near.

Proceeding by Ma'arah the party reached Aleppo, near which city were olives, apples, pears, plums, and almonds. Here they stayed with the Venetian Consul. The city traded with Persia, India, and Mesopotamia in rhubarb, gums, spices, &c. The castle on its mound and the old walls are noticed. There were eight gates.

From Aleppo they returned by Hârim (the Castle of Harenc), the great ditches of which were admired; and by a bridge (*Jisr Hadîd*) they proceeded to Antioch, which is more fully described. The population included Turks, Greeks, Armenians, and Jews. A covered way in the west wall led to the citadel.

The rest of the journey to Constantinople gives an equally interesting account of Asia Minor. They crossed the Amanus to Adana; and by Heraclea, and over the Taurus, reached Iconium, Angora, Achara, Caracar ("Black Castle"), and apparently arrived at Broussa.

The work is divided into three books. The first treats of Crete,

Lemnos, Mount Athos, and Constantinople. The second of the voyage by Rhodes to Alexandria and to Cairo, with the subsequent journey as here noted. The third is devoted to a very good account of Moslem manners, a fair description of the Korân, of the traditional life of Muhammad, and of the beliefs founded on the Sunna, or Commentary on the Korân. It concludes with notes on Turkish manners, and those of the Jews and Christians under Turkish rule. The observations are accurate and valuable, and, as a whole, it is a very interesting account of the state of the Levant in the reign of Edward VI of England and Henry II of France, written by a man of education, who gave little credence to the ignorant beliefs of Europeans in his own age, or to the legends of the ancients concerning the East, but, instead, furnishes a faithful description of all that he had noticed during his travels.

Weymouth, *March 29th*, 1897.

NOTES ON THE APRIL "QUARTERLY STATEMENT."

By Lieut.-Colonel C. R. Conder, LL.D., R.E.

I.

P. 113. The stone *Hat-Toîm*, where lost property was cried (Taanith iii, 8), seems to have stood in the lower part of the city, since it was liable to be flooded over. The block figured seems to be the base of a Byzantine pillar.

P. 119. There seems no reason why the *Jeshimon* of Num. xxi, 20, xxiii, 28, should be east of the Dead Sea. The region was the "desert" round En Gedi, and the places in Moab described as "facing" the Jeshimon are in view of this western desert. Beth Jeshimoth ("house of deserts") has long been placed at *Suweimeh*.

P. 123. In connection with Mr. Baldensperger's useful answers to my questions as to the Fellahîn, a few remarks may be made. The peasants of Bethlehem and Nazareth certainly have Italian blood in their veins, which I believe is of quite recent origin; and the reasons are well known, but need not be specified. Neither of these towns were Venetian property in the Middle Ages.

El Khudr (الخضر), wrongly spelt الخدر, is identified by Christians with St. George, but by Moslems this "green one" is the mysterious figure connected with the Water of Life in a Korân legend. His shrines are, however, often at sites of Crusader towns and chapels, as at el B'aneh (St. George of Labaene of the thirteenth century).

The killing of peasant women in caves is found to be a practice both in the Antilebanon, near Bludân, and also at the *Mughâret Umm et Tuweimîn* ("Cave of Twins"), near Beit 'Atâb (the Rock Etam).

The practice of cutting off the hand for theft, which is sanctioned by the Korân, still survives among the Arabs east of Jordan.

P. 134. *Kusneh* is evidently for *el Khuzneh*, "the treasury" at Petra.

P. 147. Salt, in popular superstition, is an emblem of life. Eggs are also held to be lucky all over Syria. At springs offerings of bread are sometimes made by the peasantry.

P. 148. The idea of a closed door, in connection with death, is very widespread. Hence the custom of carrying out the corpse through a hole in the wall, instead of the door used by the living; and the special "Death's Doors" made in the walls of some ancient Italian houses for use at funerals.

II.—The Swastica or Fylfot.

The sign given in the January *Quarterly Statement*, p. 153, is usually called the female Swastica. The commoner male Swastica revolves in the opposite direction. Its great diffusion in Eastern Asia is due to its being a Buddhist emblem, "The Wheel of the Law," or otherwise the "Wheel of Rebirth," symbolising the constant passing through the six states: Heaven, Paradise, the Animal World, Hell, the World of Ghosts, and Human Life, as explained in Buddhist philosophy. I believe its appearance in America to have been due to its introduction by the Buddhists who discovered Mexico in 458 A.D. It has also been found on pottery in Peru, where other Buddhists appeared.

It is, however, much older than Buddhism, and traced all over the world. In Palestine the only instances known to me are Norman masons' marks, when it accompanies the "Shield of David" and "Solomon's Seal."

It is common in later classic designs, and connected with Apollo, Dionysus, Hercules, and Hermes. It is found on a female statue in Cyprus (as well as on that at Troy), in Rhodes and Greece, in Thera (with the Persian Artemis), at Pergamus (with Athene), at Orchomenos, in Macedon, Thrace, Crete, Lycia, Paphlagonia, in Sicily at Syracuse (under Timoleon), and on coins of Magna Grecia. It is known in this connection as the Gammadion. In Italy, it is older than Etruscan times at Cære, Chiusi, Albano, and Cumæ (on fibulæ), and in a Samnite tomb at Capua.

In the catacombs at Rome it is well known on the tunic of the Good Shepherd, and on the garments of the priests called Fossores; but, though called later the *Croix Cramponée*, it is not certain that it was a Christian emblem. It is known among the Celts, in Switzerland and the Danubian countries, on vases in Britain, plates, fibulæ, sword-belts, and arms, perhaps of foreign make, and belonging to the bronze period. To the Norse it was "Thor's Hammer," and has been found on bells in Yorkshire as a charm against thunder. It also occurs on a dolmen in Cornwall. In Gaul it is marked on coins of the third century and down to Merovignian times. It also occurs in the lake city of Lake Bourget,

and in Belgium, during the Roman period, on an inscription, *Diis Manibus*. It also is found on a Roman tomb in Algiers, and during the twelfth to fourteenth centuries in Belgium. On Roman altars, in Britain and in the Pyrenees alike, it accompanies a wheel. In Ireland and Scotland it is shown on Christian tombs of the sixth century A.D. The Slavs and Finns did not use it much, but in the Caucasus it marks early swords. It also is stamped on Arsacid and Sassanian coins in Persia. At Ibreez in Lycaonia it is found on a Hittite's robe on a bas-relief. It also occurs on Greco-Phœnician coins and seals, but does not appear to be a true Semitic emblem, nor is it ancient in Egypt. It is common among the Eastern Aryans of India, and taken from them by Chinese and Japanese Buddhists. It has even been found at Coomassee in Africa, perhaps on foreign articles.

In South America a calabash of the Lengua tribe is so marked, besides the instances in the Yucatan mounds on pottery. It is often connected with the sun, as at Melos, where it precedes the chariot of Apollo, or on coins of Gaul with Apollo Balenus. It was taken (probably by the Norse) to Iceland, is found also in Malta, on Etruscan vases, on the Newton stone, and on a Celtic monument at Aberdeen.

THE MÂDEBA MOSAIC.

By Ch. Clermont-Ganneau, LL.D., Membre de l'Institut, Professeur au Collège de France.

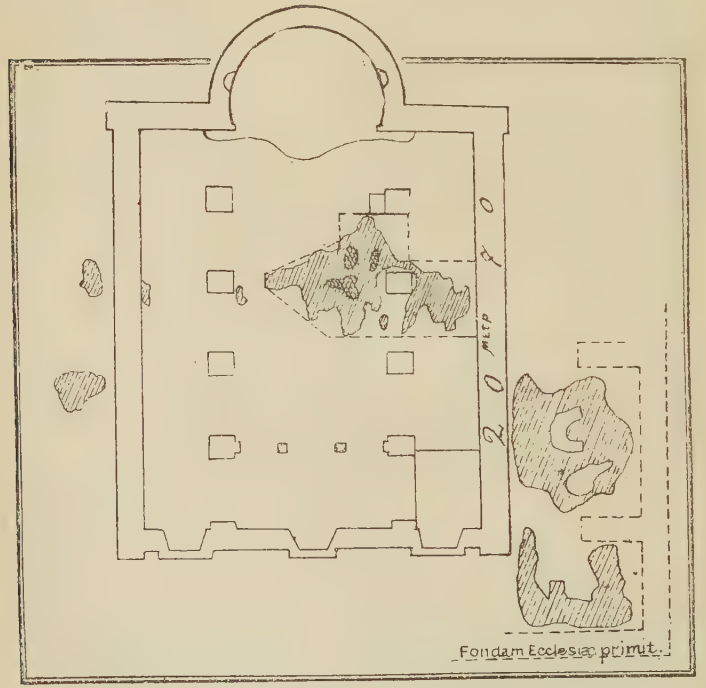
Translated by permission from his "Recueil d'Archéologie Orientale," Tom. II, p. 161, 1897.

I.

At the meeting of the Academy on March 9th, 1897, M. Héron de Villefosse read a first note by Father Lagrange on the discovery of this unique relic. At this meeting I also read several passages from a letter dated March 2nd, which Father Paul de St. Aignan, of the Franciscan Convent at Jerusalem, wrote to me on this subject, containing some interesting notes upon this discovery and upon what had been done to make use of it for the improvement of our archæological knowledge. I think that I had better reprint these passages in the place :—

". . . . You have, no doubt, heard of the discovery made at Mâdeba in December, a fifth century mosaic map of Christian Palestine and Egypt. The discoverer, Father Cleopas, librarian to the Greek Patriarch, has sent us his description of it, a very full one, though incomplete on certain points. Our printing press will undertake to publish it ; I have already begun to translate the MS. into French, and will send it to you when I have finished it.

"But the essential point, in my opinion, is the accurate restoration of the fragments of the map to their places, for unluckily the mosaic is greatly mutilated. By order of the Greek Patriarch, M. George Arvanitaki, a member of the Astronomical Society of France and geometer to the Patriarch, went to Mâdeba. Before the map was finished the Patriarch died, and the poor geometer then saw himself on the point of losing the fruit of his labour. We encouraged him, and on the 5th of this month he will send us the Mâdeba map in twelve sheets of half a metre square. I already have his promise to do this, and



PLAN OF THE CHURCH AT MÂDEBA, SHOWING POSITION OF MOSAIC.

barring unforeseen accidents, this map will be sent off to you by the next mail on March 9th. It is, I think, important that this document should be published by photo-lithography as soon as possible, so as to give a general idea of this piece of evidence, which is of the greatest value to the student of Biblical and Gospel tradition.

"Upon this map the tribes of Israel are marked, each tribe with its boundary and its chief towns; Biblical or Gospel events are alluded to by a word—the greater part of Jacob's prophecy is noted thereon, with some variations from the received text (Gen. xlix, 25; Deut. xxxiii).

The administrative districts into which the country was divided in the fifth century are there also, and some hitherto unknown names of towns.

"Besides its purely historical and geographical interest, the archæologist will find this mosaic an interesting and instructive work. Each town or holy place is represented by a building of some kind : Jerusalem, Nâblus, and Gaza are encircled by walls ; one can recognise the chief gates, and the public buildings show the outward appearance of these cities.

"From an artistic point of view the makers of the mosaic have had enormous difficulties to encounter in showing the configuration of the land ; mountains, plains, valleys, rivers, torrents, seas, roads, &c.

"Of course one must not expect to find the distances of these towns from one another, or their relative positions, shown with mathematical accuracy, but the general arrangement is displayed well enough. Indeed, it forms a very curious and very important piece of evidence in matters relating to Palestine.

"The map, which I hope to send you by the next mail, has the great advantage of offering every guarantee of accuracy that could be wished for, being made by a professional map-maker, and reproducing all the details of shape and colour that are to be found in the original. With regard to inscriptions, M. Arvanitaki is an accomplished linguist, a matter of some importance when abbreviations and contractions have to be copied."

While awaiting the arrival of the map promised by Father Paul de St. Aignan, I have thought it right to lay before the Academy some remarks about this discovery, which I here summarise.

The old Moabite city of Medaba, or Mâdeba, which stands on the further side of the Dead Sea, between Hesbân and Dhîbân, the ancient Heshbon and Dibon, appears to have been a very flourishing Christian centre during the Byzantine period. It was the seat of one of the bishoprics of Arabia. The remains of many important churches and basilicas have already been found there, besides Christian inscriptions, and fragments of splendid mosaic pavements. Some of these fragments seem to me to have actually formed part of our great geographical mosaic, and might have foreshadowed its discovery, to judge by the nature of the inscriptions found upon them ; indeed, upon one of these fragments we read the words Ζαβουλὼν παρά(λιος κατοι)κήσει . . . καὶ παρατενεῖ ἕ(ως Σιδῶνος), which are clearly taken from the LXX version of Genesis xlix, 13 (Jacob's blessings): by the side of this was drawn a ship, which some have tried to make out to be "St. Peter's boat," the church being, according to them, dedicated to St. Peter : in this place it is clearly a mere symbolical indication of the sea. On another fragment appears the name of the seaside city of Sarephtha, which is closely connected with Sidon in the Bible, 1 Kings, xvii, 9, LXX. "Zarephath which belongeth unto Sidon."

The opinion mentioned by my correspondent, which refers the

construction of this geographical mosaic to the fifth century, is based upon grounds with which I am not yet acquainted. It would be well to wait for more light before deciding. All that I can say is, that among the fragments of a previously discovered mosaic at Mâdeba, there is a large Byzantine inscription referring to a basilica dedicated to the Virgin. This dedication is dated, but unfortunately there is a doubt about the numerical letters which form the date, and it is possible that this date may bring us down to the sixth or even the seventh century.[1] If the workmanship of the geographical mosaic belongs to the same period as this mosaic, we shall have here a chronological hint which we must not neglect.

II.

Father Paul de St. Aignan has written another letter to me, dated March 9th. This letter also I have communicated to the Academy, at its meeting on March 26th. I think it worth while to make the following extracts from it :—

"My letter of March 2nd told you of the exact drawing of the Mâdeba fragments. The Greek Patriarchate has just claimed this drawing, so I can only send you some negatives, and must put off sending a copy of the drawing till the next mail steamer, which sails on the 16th. However, the negatives which I send you will suffice till then for you to examine this really curious relic.

"In spite of all the precautions which I took, there may be a slight malformation of the lines caused by the shaking of the apparatus, which prevents a perfect picture being taken ; but the plates, which are Lumière's orthochromatic, represent the scale of colours fairly well.

"The lettering is in black on white ground, and in red on green, yellow, or black grounds. Wherever one or more letters are missing, the distance has been reproduced with mathematical accuracy.

"This is the true story of how the discovery was made :—

"Thirteen years ago Monsignor Nicodemus, the Greek Patriarch of Jerusalem, received a letter from one of his monks who was dwelling beyond Jordan. The monk said that at Mâdeba there was a large and fine mosaic pavement covered with the names of cities, such as Jerusalem, Gaza, Nicopolis, Neapolis, &c., and asked for instructions as to what steps he was to take in the matter. The Patriarch made no answer.

[1] (1) With regard to this subject, *see* my "Études d'Archéol-Orient," vol. ii, s. 18, note 4. The geographical origin of the mosaic being now proved, the interpretation of the legend by Σάρεφθα, Μακρὰ Κω[μή], which I had put forward, gains fresh force; indeed, it may well be that in the fifth century Sarephtha bore the name of "Long Village." In this case the actual reading in the Syriac text of the "Life of Peter the Iberian" ought to stand, as also should the geographical identification which I have there proposed.

(2) *See*, on this subject, the present volume, p. 52, s. 24, "The Mâdeba Mosaic."

Subsequently he was exiled to Constantinople, and Monsignor Gerasimos put in his place. Gerasimos found the letter from the Mâdeba monk in 1890; he guessed that this was an important archæological discovery, and straightway sent off a master-mason graced with the title of *architect*, with orders, if the mosaic were a fine one, to include it in the church which was about to be built at Mâdeba for the use of the Greek population.

"Alas! the intentions of Monsignor Gerasimos were quite misunderstood. The mosaic, which by the testimony of four monks was until then *almost complete*, was partly destroyed in order to lay the foundations of the church, sacristy, and outbuildings of the mission. The church itself was built without symmetry, that it might agree with the original one. The border of the mosaic, with its Biblical decorations, is now *outside* it. God knows what these workmen may have destroyed, when we see by the ground-plan of the church that they broke the mosaic to set up a pilaster! The mischief is done. The *architect* came back and reported that the mosaic did not possess the importance which had been attributed to it.

"*Last December* Father Cléopas, the librarian of the Greek Patriarchate, went to spend a few days at Jericho. Monsignor Gerasimos, who had never lost his interest in this mosaic, prevailed upon him to push on as far as Mâdeba. This librarian is an intelligent man, a student, and a lover of antiquities; his judgment is to be trusted. He returned at the beginning of January, bringing back with him a sketch of the map and some notes, which are now being printed in our press.

"Monsignor Gerasimos, who at last had received proper information, sent M. Arvanitaki to make a drawing of the map. You know the rest.

"All that I now have to do to finish these details is to send you by the next post a copy of this map. I can answer for its minute accuracy."

The nine negatives which Father Paul de St. Aignan said that he sent to me were unluckily broken on the journey. However, I have managed to print from them after a fashion, and have laid the results before the members of the Academy with a few words of explanation. I also informed Father Paul de St. Aignan by telegraph about the accident which had befallen his negatives, and he has answered that by the next mail steamer he will send me some new works which will make good this loss.

III.

In the meantime Father Lagrange has published a short pamphlet[1] about our mosaic, together with a faithful sketch made by Father Vincent. This dissertation, in spite of the limits within which it is confined, nevertheless contains the root of the matter and does honour to

[1] "La mosaique geographique de Madaba," by the Rev. Fathers Cléopas and Lagrange.

the learning of its writer. Without affecting to make a thorough study of it, and reserving to myself the liberty to refer to it again on future occasions, I shall now venture to set forth some brief remarks upon certain points which have been somewhat neglected.

It should be noticed that the orientation of the churches represented at each place in the map agrees with the orientation of the map itself—the map is meant to be looked at towards the east, and all the churches are set at an angle so as to show their west front, their chancel, which is not seen, being supposed to be on the side toward the east, it is really toward the south-east, owing to an arrangement which this device renders necessary. The only exception is an important building at Jerusalem in which one is tempted to see a representation of the sanctuary of the Holy Sepulchre.

In order to find one's way through the confused mass of legends and of localities shown on the map we must bear in mind the general principle that the geographical names are regularly written *above* the places, whether large or small, to which they refer. It is the explanatory legends alone, when they occur, which can be inscribed below or beside the place.

The position given to **KOPEOYC**, on the banks of the Jordan, definitely establishes the identity of Josephus's Κορέαι with Kerâwa, a hypothesis in support of which I had given some new arguments, and it utterly demolishes the old notion that it was at Kuriyût, in the midst of the hill country.

The bridge or wooden footbridge (perhaps with a ferry boat attached), which crosses the Jordan above Koreous, must correspond pretty nearly with the position of the old Arab bridge of Dâmieh. The small isolated hill shown close by it on the west side is probably the Kŭrn Sŭrtŭbeh.

—[. . . **ANA** . . . ought probably to be restored by [Θ]ανα[θα] rather than by [Θ]ανα, because there is room for two more letters after the second *alpha*. This form also corresponds more nearly to the original Hebrew form *Taanat*.

—[**AK**]**PABITT**[**INH**] instead of Ἀκραβαττίνη, agrees exactly with the Samaritan form Akrabit (עקרבית).

—**ΘEPACΠIC** corresponds well enough, both in name and in position, with the ruins of *Deîr 'Asfîn*, to the south-west of, and not far from, Kulunsaweh. We know that the Arabic word *deîr* is borrowed from the Aramaic; there is, therefore, no ground for surprise at its occurrence in Syrian toponymy before the Arab conquest.

—**BETOMEATEZIC** is very hard to settle. From its place on the map, between Theraspis and Aditha, it seems as though it ought to be somewhere in the neighbourhood of Mejdel Yâba. The name is singularly like that of a Crusading casal, *Bethmelchi* or *Bethmelchis*, which has not hitherto been identified, but which seems to have been situated just about where we want to find it. I may be allowed to go into some details on this subject.

A Bull of Gregory IX, in 1227,[1] confirming the privileges of the church at Bethlehem, mentions among the possessions of this church "eight carucates of land in the casal of St. Mary, and the casals of *Bethmelchi*, Heberre, and Luban." The document speaks just before this of the country of Ramleh, and just after it of Jaffa and of the River Eleutherus.[2]

It is a mistake to try to identify the *Bethmelchi* of the Middle Ages with *Kafr* Mâlek, to the south of Sinjil,[3] which is quite a different village, and was well known to the Crusaders under its proper name (*Cafermelic*, *Cafarmelech*).

Here is the technical proof that the Casal of St. Mary was indeed in the country of which I have just made mention. By a deed dated 1617,[4] Baldwin of Mirabel sold *the Casal of St. Mary*, which adjoins the territory of Belfort,[5] to Gilbert D'Assaily, Grand Master of the Hospitallers, for three thousand byzants. There can be no doubt that this refers to our casal, for the document contains this instructive reservation—"with the exception of the land belonging to St. Mary of Bethlehem which lies within the territory of the aforesaid casal." We have, indeed, just seen, in Gregory IX's Bull, that the church at Bethlehem actually owned an estate which formed part of this Casal of St. Mary.

In another document[6] St. Mary's casal is mentioned, together with that of Caphaer, which, as we learn from other sources,[7] was a dependency of the Lordship of Ramleh, and is, perhaps, *El-Kefr*, to the north of 'Aboûd.

All these pieces of evidence agree, as I have said, in leading us in the direction of Mejdel Yâba. On examining this country I find a group of places whose names agree very well with those which we want. First of all, there is *el Lubban* = *Luban*, to the north of and quite close to Rentîs. Next comes Kh. *el Bîreh* = *Heberre*, to the south-west of Rentîs. South of El Bîreh there is a ruin named Kh. 'Aly *Malkîna*,

[1] Riant, "Études sur l'histoire de l'église de Bethléem," vol. i, p. 144: "In casale Sancte Marie, octo carrucatas terre, casalia Bethmelchi, Heberre, et Luban."

[2] The 'Audjâ. The Crusaders, when they gave it the name of Eleutherus, seem to have been influenced both by inexact reminiscences of classical antiquity and also by the name of an ancient Arab city, now swept away, which stood on the banks of the 'Audjâ, *El Aoutariyé*. I shall discuss this matter in detail in another place.

[3] Röhricht, "Studien zur Mittelalterl. Geogr.," p. 227.

[4] "Cartulaire Général de l'ordre des Hospitaliers," ed. Delaville Le Roulx, vol. i, No. 371, p. 255.

[5] "Casale quod appellatur S. Marie, contiguum territorio Bellifortis." One of the signatures of the deed is that of Isaac de Naalein, who was born in one of the casals of that district, *Na' lein*, to the north of and close to Medié (Modin). For the ratification of this sale by King Amaury, *see ib.*, No. 388.

[6] Cartulary, &c., No. 494.

[7] *Id.*, *ib.*, Nos 487, 488, 489.

whose name perhaps has retained a part of *Bethmalchi ;* perhaps it is here also that we may agree to place the Betomelgezis of the Mâdeba mosaic. As for St. Mary's casal itself, it is not easy to discover it, since this purely Christian name has naturally disappeared, together with the Crusaders. It may be Rentîs, or rather 'Abûd, where one may see the remains of a church built in the Frankish fashion, and known even at this day under the name of the Virgin.

The "ancien name" which lurks under the letters **ΑΛΩΝΑΤΑΘ Η ΝΥΝ ΒΗΘΑΓΛΑ**, which has baffled Father Lagrange, is nothing more than Ἄλων Ἀτάθ = Ἄλων (Ἄλως) Ἀτάδ, "the threshing-floor of Atad," Gen. v, 10, LXX. The mosaic-worker has but followed a tradition which is indeed omitted by Eusebius, but which is literally reproduced by St. Jerome in his version of the Onomasticon (*see* the words Area Atad), a strange tradition which would make this famous Biblical locality actually the same as *Bethagla.*

—**ΒΕΘΗΛ, ΓΟΦΝΑ, ΓΑΒΑΩΝ, ΑΡΜΑΘΕΜ**, from their relative position, clearly represent *Beîtin, Jufna, Jibia*, and *Beît Rîma.* As for **ΡΑΜΑ**, which forms part of the same group, I have not succeeded in determining its place.

—**ΒΗΤΟΜΑΡCΕΑ Η ΚΑΙ ΜΑΙΟΥΜΑC.**—The suggested identification with the Μάρισσα or Μαρρίσσα of Josephus ("Antiq." J., XIV, i, 4) must be received with some caution, especially since, according to another passage of the same author (XIII, xv, 4) this place, which is connected with Adora and Samareia, must have been, not in Moab, but in Idumæa.

—The sanctuary of St. L . . . ? perhaps is the present *Mechad* (= Μαρτύριον), near Môta.

—**ΖΟΟΡΑ.**—This evidence of a plantation of palm trees on the traditional site of Seegor is of great interest, since this palm grove gives the reason for the name of *villa Palmarum* and *Palmer*, which was given to the place during the period of the Crusades.[1]

—**ΑΙΑ** can be nothing else than the Αἰη of Eusebius, which he places to the east of Areopolis.

—Can **ΘΑΡΑΙC** be the present *Kh. Talha*, between Kerak and the Dead Sea? The name reminds one of 'Ain *Ter'ain*, but the situation seems to be too far to the south.

—If we are to read **(Ζ)ΑΡΕ(Δ)**, the brook Zared, one would be tempted from a purely topographical point of view to identify the valley of the mosiac with that of Wâd Karak, rather than with Wâd el Ahsa : it should be noted that the last letter looks more like an *alpha* than a *delta*, and that the middle part of Wâd Karak bears the very name of *Wâd Dhrâ'a.*

—**ΚΑ . . . ΕΡΟΥΤΑ**, both in name and position would agree well enough with Kh. *Kefr Rût* (otherwise *Kefr Lut*) near Beît-'Ur et Tahta, to the west north west.

[1] "William of Tyre," xxii, 30. Compare also "Fulcher of Chartres."

—ΑΔΙΑΘΙΜ.—M. Arvanitaki's copy has the correct reading which one would expect instead of ΑΔΙΑΕΙΜ.

—Modin.—With regard to the extremely interesting reading ΜΩΑΙΘΑ, *see* my remarks on ΣΑΦΙΘΑ, further on.

—Gath.—The position attributed to the famous city of the Philistines agrees well enough with the Jewish tradition which places it at Ramleh.

—Gedour, Gidirtha.—The place on the map suits that of Gezer well enough : the likeness of the names may have produced confusion between them. Nevertheless, if this be so I cannot account for the existence of the Aramaic form *Gidirtha*. Moreover, the Onomasticon mentions a Gedrous, ten miles south of Lydda, which it identifies with Τέδούρ, the Gedor of the Bible, which it mentions as quite distinct from Gezer.

—ΕΝΕΤΑΒΑ.—Compare the עין טב of the Talmud, mentioned in connection with Yabné.

—ΣΑΦΙΘΑ seems to me both in name and in position to answer to the Tell *es-Sâfié* of the present day. The name is more commonly pronounced Tell *es-Sâfi ;* but the existence of the primitive feminine form is proved by the testimony of ancient Arab writers. Hence we can deduce a general rule of considerable importance for the student of place-names : it is, that the Aramaic termination *îtha* becomes regularly *ié*[1] in Arabic, and consequently that this termination (which must not be confounded with *iyé*), so common in the place-names of Arabian Palestine, is a mark of Aramaic origin and a proof of comparative antiquity in the place-name. This forms an additional argument, and one not to be despised, for the identity of *Modin* with the Arab *Medié ;* indeed, we have already seen that this is the name applied by the mosaic to the famous birth-place of the Maccabees : ἡ νὺν Μωδιθά " which at this day is called *Moditha*" ; now, according to the rule which I have just stated, Μωδιθά implies *a priori* an Arabic equivalent *Mediĕ*.[2]

This reasoning also applies to an identification which I once suggested —and which has since been completely established—of the *Sûsîtha* of the Talmud (*Hippos* in Decapolis) with *Sûsié*. It will, I think, be found applicable in numbers of other cases—Ἀδιθά = the Arabic Hadîtha is only in appearance an exception to this rule, since the *th* is here a radical letter which forms part of the word itself (from the root *hadath*) and is not the terminal *th*.

—Before the name of Ascalon stand two mutilated lines, of which Father Lagrange could at first make nothing, but in which he afterwards

[1] The Aramaic termination *îtha* sometimes remains unaltered in Arabic. A notable instance of this is afforded by a place of the same name in Upper Syria, *es-Safîta*, the White Castle (Chastel *Blanc*) of the Crusaders, the Argyrokastron of the Byzantines. This Argyrokastron is mentioned by Cedrenus and Cantacuzène, together with another castle in the same district, Μενῖκος, which I propose to identify with El-Meniqa, one of the fortresses of the Assassins, often mentioned by Arab historians.

[2] Pronounce Meŭdié, the ω of the Greek transliteration corresponds to the same sound in Λώδ = Leud(d) = Lydda.

(in a MS. correction in his copy of the dissertation) recognised the letters ΝΑΙΓΥ[Π]ΤΙΩΝ. But to what can these letters refer? I have no doubt that they allude to a famous sanctuary at Ascalon which I have had occasion to mention elsewhere,[1] that of the *three Egyptian martyrs* (*τῶν τριῶν μαρτύρων* Αἰγυπτίων). Perhaps also the three obelisks shown on the mosaic in the midst of a large rectangular open space may represent the monuments which commemorated these three martyrs, and may be the sanctuary to which Antoninus Martyr[2] tells us he went in A.D. 570 to pay his devotions.

—ΠΡΑCΙΔΙΝ.—What can this mysterious place be, whose name is written beside those of Θαμαρά and Μάψις, both well known from the Onomasticon? I propose to read Πρα(ι)σίδ(ι)ον = Præsidium; the stone-cutter perhaps forgot to put in the first *iota*: the absence of the second one is regular, for the termination *ιον* is always contracted into *ιν* in the colloquial Greek of Syria. This name must owe its origin to the existence of a Roman military post, which St. Jerome mentions as being in this very district: "The Castle of Thamara is one day's journey from the town of Mampsis (= Mapsis), where now there is a Roman garrison (*præsidium*)." Eusebius in the corresponding passage has "a guard . . . . of soldiers."[3]

—ΜΩΔ.—If this word is incomplete, one would be inclined to read Μω(λ)[αδά]; *see* the Onomasticon for Joshua xv, 26. If it is complete, ought we to emend it into Μω(λ) = Kh. el-*Milh*, to the south-west of Tell 'Arad, or perhaps Kh. el-*Muweilêh*, to the north of and close to Beersheba?[4]

—ΒΗΡΟCCΑΒΑ.—This transliteration of the Biblical name Beersheba is remarkable. One seems already to feel the (Bir(ou)'s-sab'a) advance of the Arab influence, which indeed may very well have already been making itself felt in these districts on the extreme southern border of Palestine.

—ΓΕΡΑΡΑ.—The position of Gerar, shown close to Beersheba[5] and to the west of it, does not encourage the modern identification of it with Kh. Umm *Jerrar* (near Gaza, to the south).

—ΑΡΑΔ.—This name, as Father Lagrange observes, does not appear in Eusebius. But St. Jerome enables us to fill the gap (*see* Arad) and to correct in the corresponding passage of Eusebius Αραμά into Αράδ, besides giving us the exact position of the place.

[1] *See* vol. ii of my "Études d'Archeologie Orientale," p. 4, note 4, and the passages there quoted and discussed.

[2] Ch. xxxiii.

[3] For the common use of the word *præsidium* (garrison town) of Syria, *see* the Notitia dignitatum "Ala secunda Felix Valentiniana apud *Præsidium* . . . cohors quarta Phrygum *Præsidio*."

[4] We know that the aspirate *h* is, as a rule, omitted in the transliteration of Semitic names into Greek.

[5] Note that Cyril, in his commentary on Amos, identifies Gerar with Beersheba, which implies that the two places were close together.

—ΦΩΤΙC.—I propose to identify this with Khirbet *Futeis* or *Fetis*, which has faithfully kept its ancient name, and stands about half-way between Gaza and Beersheba.

—ΟΡΔΑ.—As far as position goes, this would suit Kh. Umm *'Adra* (transposing the *d* and the *r* ?) well enough.

—CЄΑΝΑ.—I propose to identify this with Kh. *Sîhân*, about nine kilomètres south-east of Gaza.[1] This place-name of Sîhân appears in several other parts of Palestine ; the origin of the places so-named must consequently date from a period before the Arab invasion.

—ΩΓΑ.—If this name is complete, can it be *Hûj*, about eight kilometres east of Gaza ?

—ЄΔΡΑΙΝ.—Perhaps Kh. *el-'Adâr* (singular form), eight kilometres south-south-west of Gaza.

IV.

I have received the following letter from Father Germer-Durand, who devotes himself with such praiseworthy zeal to the study of the antiquities of the Holy Land :—

"Jerusalem, *March* 29, 1897.

"Sir,

"I send you, together with this letter, a complete photograph of the Mâdeba map. This photograph consists of ten sheets : first, a general view taken from the pulpit, on which most of the inscriptions can be read with a magnifying glass ; and then a series of nine sheets giving the details, on a scale of about 0m.08. Each sheet overlaps the adjoining ones, so that it is easy to put them together with the help of the general view. We have spared no pains to obtain a result which will satisfy scientific archæologists. With the help of a light scaffolding, which could be quickly set up and taken down, we took our photographs, looking straight downwards from a height of 3m.50. By adopting this plan the inaccuracy due to the lenses becomes almost imperceptible.

"I shall be obliged if you will be so good as to lay these photographs before the members of the Institute. They will complete the communication previously made by Father Lagrange, to whom I am pleased to be able to render this fraternal service.

"I hope after Easter to be able to go in my turn as far as Petra with a large company of students, and hope to be able to bring back a series of photographs and squeezes, especially of the milestones between Dhat Ras and Petra."

The photographs which arrived with Father Germer-Durand's letter, which I laid before the Academy at the meeting on April 9th, are done in the most satisfactory manner possible. They will do to work from to make a good phototype reproduction of the mosaic. It is to be hoped that this process may be adopted in the album of the mosaic of Mâdeba,

[1] Probably سحان Sehan, of Robinson's lists.

which, I learn, is soon to be published at Paris by the Abbé Abel, of the Augustinian Convent of the Assumption.

V.

I have only just received (April 15th), by the kindness of Father Paul de St. Aignan, an interesting pamphlet[1] by Father Cléopas, to whom we are really indebted for the discovery of the Mâdeba mosaic. Without making any pretension to having solved all the problems raised by the study of this valuable and instructive relic of antiquity, the author describes it in detail, and while he describes it gives us some new lights upon it, which I think are worth mentioning.

In the first place, there is the evidence (p. 23) of trustworthy witnesses, according to Father Cléopas, who saw the mosaic some years ago, before the mutilations which it has recently undergone, and declare that they recognised the towns of Ephesus and Smyrna thereon.[2] If this information is true, the map must have included Asia Minor on the north, just as it does Lower Egypt on the south side.

Next, there is (p. 10) a suggestion due to the Archimandrite Photius, who has once read in one of the ancient Greek MSS. preserved at Mount Sinai a passage containing an allusion to the Mâdeba mosaic. It is greatly to be wished that this suggestion, upon the importance of which it is needless to dwell, should be verified.

At the end of his work Father Cléopas reproduces several Christian inscriptions, copied by him at Mâdeba,[3] one of which refers to the restoration of an immense underground cistern by the Emperor Justinian. But the most important of these, because it may perhaps furnish us with a hint as to the date of the geographical mosaic, is that which Father Cléopas has copied from a mosaic which forms the pavement of a little round crypt connected with the great basilica. He reads it as follows :—

χ(ριστυ)ς ὁ Θ(έο)ς τὸν οἶκον τοῦτον ἀνήγειρεν ἐπὶ Σεργίου του ὁσιω(τατου) ἐπισκόπου, σπουδῇ Σεργίου πρ(εσβύ)τ(ερ)ου τοῦ ἁγίου Αἰλιανοῦ, ἐν τῷ ϋς ἔτει.

We must be cautious about the reading of the date ; the numerical letters which form it appear thus in the printed copy : ΫΣΤ. This is

[1] Ὁ ἐν Μαδηβᾷ μωσαϊκὸς καὶ γεωγραφικὸς περὶ Συριάς Παλαιστίνης καὶ Αἰγύπτου χάρτης, ὑπὸ Κλεόπα Μ. Κοικυλίδου, βιβλιοθηκαρίου τοῦ Ἱ Κοινοῦ τοῦ Τάφου. Ἐκδίδοταν το πρῶτον ἐπιμελείᾳ τῶν αἰδ. ΠΠ. φραγκισκανῶν. Ἐν Ἱεροσολύμοις, ἐκ τοῦ τυπογραφείου τῶν φραγκισκανῶν, 1897, 26 pp. 8vo. (finished printing on March 8th).

[2] Father Cléopas does not mention Constantinople, which is spoken of by Father Lagrange, *l.c.*, p. 181.

[3] I do no more than allude to certain inscriptions copied elsewhere; an inscription in Mosaic (with the formula ΦΩC ZΩHC and ΑΩ), one from the convent at Deir el Kelt (?), a sepulchral inscription from the Viri Galilæi, and a Judæo-Greek epitaph on a sarcophagus at Sebaste.

clearly an approximation, for these numerical letters cannot appear together. ΣΤ seems to have formed a contraction, which Father Cléopas has interpreted as the siglum *Faû*. If, as he thinks, we ought to read it as "the year 406," we shall then have to decide the era according to which this date is calculated; the era of Bostra, in the province of Arabia, would give us A.D. 511; Mâdeba may have had an era of its own.

(*See Note by* Sir CHARLES WILSON, p. 239.)

THE TABERNACLE ROOF.

By Professor THEODORE F. WRIGHT.

In the *Statements* for July, 1896, and April, 1897, interesting suggestions have been made in regard to the Tabernacle, and in the latter place Mr. William Brown refers especially to Mr. Fergusson's theory of the ridge-pole and to Rev. H. Proby's theory of the ridge-cord. Have these gentlemen examined an Oriental tent? If so, did they see the ridge-pole or ridge-cord which they are making or have made the bases of their theories? Have they considered the objections which must arise against any construction which adds to the Biblical description what it borrows from purely Occidental sources?

In his little book on the Tabernacle Mr. G. W. Colton, of New York, constructs the Tabernacle without putting anything of his own into the plan. He begins with the form of an Oriental tent, and he ends with an Oriental tent. How otherwise should he begin and end? Of course he has no ridge-pole or ridge-cord. The canopy is amply supported, but has not the stiff lines which we of the West are accustomed to in tents.

Mr. Colton first places the planks as directed, and fastens them with the bars and corner-bindings, and so gets a firm structure. He omits the ropes invented by others to hold the planks in place because they are not given him by the Scripture account and are wholly unnecessary. I have tested the strength of his model and have been impressed by its stability.

Now, if the canopy of the Tabernacle were flat these planks alone would amply support it; but a flat tent roof is no more Oriental than a pitched one. We remember, therefore, the five posts of the outer veil and the four posts of the inner veil, which would give fuller support. Moreover, while the staves of the ark could not be removed, those of the table, altar, and lampstand would be very much in the way when the Tabernacle was standing, and these would be so many additional supports, and would be quite like those now used in Oriental tents to increase their height.

In such a construction as suggested here, the architect, like Mr. Colton, uses only legitimate material, and has the satisfaction of knowing that he is in touch with Oriental usage. It is unnecessary to adopt every

minor detail of Mr. Colton's work, but it is impossible to deny his fidelity to the Biblical description and to Oriental types. His illustrations, compared with those of other and more ambitious works on this subject, vindicate themselves at once from the ordinary and well-grounded objections made against dogmatic and extra-scriptural and non-Oriental representations of the Tabernacle.

CAMBRIDGE, U.S.A.

"AREOS," "ARISU," OR "AARSU" OF THE "HARRIS PAPYRUS," "AARON" OF EXODUS.

By M. FORBES.

ACCORDING to the "Harris Papyrus," the XIXth dynasty of the Pharaohs "came to an end in great disorder, anarchy, and troubles of all sorts. The father of Rameses III at last arose and brought about order and peace, and was succeeded by his son, in whose reign this papyrus was written.

Amongst the leaders of rebellion spoken of in it, one is named "Areos," "Arisu," or "Aarsu," a Syrian, or of the Semitic race, who became great and headed an emigration. Is not this Aaron, who, from an Egyptian point of view, would be the leader of the Israelites when they left Egypt? His whole life had been spent there, he had shared all the troubles and oppressions with which his people had been afflicted, and was a leader in their struggles after freedom, so that his name would be well known in Egypt.

It was different with Moses, who was not fully recognised, by the Israelites even, as their leader till after the rebellion of Dathan and Abiram. Excepting the few years of his infancy, he had never lived amongst his brethren, but had been educated in "all the wisdom of the Egyptians and become mighty in words and deeds" (Acts vii, 22), and being the adopted son of Pharaoh's daughter, must have had many possibilities of attaining earthly greatness, perhaps even a chance of the throne. It was not until he was full forty years of age that it "*came into his heart* to visit his brethren, and seeing one of them suffer wrong he killed the Egyptian, for he supposed they would have understood how God by his hand would deliver them; but they understood not (Acts vii, 23–25), for next day, seeing two of them quarrel, he said to him that did the wrong, "Wherefore smitest thou thy fellow?" who answered, "Who made thee a prince and a judge over us? Intendest thou to kill me as thou didst the Egyptian yesterday?" And Moses feared when he found it was known, and fled from the anger of Pharaoh, taking refuge in the land of Midian (Exodus ii, 12–15). Here he was kindly received by Jethro the priest of Midian, and was "content" to stay and keep his flock, afterwards marrying one of his daughters. On his first arrival he

was described by them as an "Egyptian" who had helped them against the other shepherds in watering their flock.

The Israelites knew that the time was drawing near when, according to God's promise, "they would be delivered from the nation who afflicted them" (Genesis xv, 14, 16), which knowledge would be an incentive to struggle after freedom, and Moses must have thought, from his exceptional position, that he was being prepared by God in this way to be their deliverer. And so he was! but the time was not quite come, and his way was not God's way—he had to be trained as God's "servant" in all things, and had to unlearn much and learn still more before he could be the leader and lawgiver of God's people.

For forty years he had studied life and learned the wisdom of this world at the Court of Rameses the Great—now for other forty years he must learn the wisdom not of this world while leading the solitary life of a shepherd! What must this change have meant to one straight from life at the Egyptian Court? What a different man he became by the end of this disciplinary training!

Bold and rash at the beginning—all spirit seems crushed out of him at the end; for when at last God says to him, "Come now and I will send thee unto Pharaoh, that thou mayest bring forth my people out of Egypt," his answer is, "Who am I that I should go unto Pharaoh, and that I should bring forth the children of Israel out of Egypt?" (Exodus iii, 10, 11). Three times he refuses to go, even though God gives him a direct commission—three miraculous signs—and a promise to be with his mouth.

At last God's anger is kindled, and He says, "Is not Aaron the Levite thy brother? I know that he can speak well" (Exodus iv, 14). Moses is then told that Aaron is to be his spokesman unto the people. "He is to be to thee instead of a mouth, and thou shalt be to him instead of God" (Exodus iv, 16). Reluctantly he obeys, God assuring him "that all the men are dead who sought his life" (Exodus iv, 19). He must have been a forgotten man! Rameses II was dead, three short troubled reigns had followed, and now the Pharaoh of the Exodus was on the throne. All these changes would serve to obliterate the memory of the alien adopted son of Pharaoh's daughter who had fled from Egypt forty years previously. He returns to Jethro, his father-in-law, and asks permission "to return to Egypt unto his brethren and see whether they be yet alive" (Exodus iv, 18): by the last clause it would appear as if he had had no intercourse with them since his flight. God promises him a "glad" (Exodus iv, 14) welcome from Aaron, and desires Aaron to go and meet him, which he does in the "mount of God," and Moses tells Aaron all the words of the Lord and all the signs he had commanded him.

They return to Egypt and gather together the elders of Israel, and *Aaron* spake all the words which the Lord had spoken unto Moses, and did all the signs in the sight of the people and they believed (Exodus iv, 29–31).

Moses had no plan of his own, for when Korah, Dathan, and Abiram

rebelled, he says, "Hereby ye shall know that the Lord hath sent me to do all these works: for I have not done them of my own mind" (Numbers xvi, 28). Instead, he brought a peremptory message from God to Pharaoh. "Thus saith the Lord. Israel is my son, even my first-born. Let my son go, that he may serve me, and if thou refuse to let him go, behold I will slay thy son, even thy first-born' (Exodus iv, 22, 23). There was to be no delay, therefore the stay of Moses in Egypt at this period of his life need not have extended over more than six weeks, as all that follows could have taken place within that time, and so a short stay of a *stranger* could not have made such an impression as that his name should be mentioned in a public record written in the second reign of a new dynasty, especially as so many of those who saw him at Court would likely be of the "first-born" killed on the Passover night, or of those drowned in the Red Sea, whilst others would disappear in the confusion attending a change of dynasty. Besides, he was not prominently before the Egyptians except in visiting Pharaoh with Aaron as his spokesman.

When Moses and Aaron go and ask that Israel may be let go, Pharaoh refuses, and Moses desires *Aaron* to perform the signs given. The Rod becoming a Serpent—the water of the river turning to blood—the frogs covering the land—and the dust becoming lice on man and beast (Exodus vii, 19, to viii, 19); all these miracles were performed by Aaron. The first three were imitated by the Magicians, but the last was beyond their power, and they acknowledged to Pharaoh that it was "the Finger of God" (Exodus viii, 19).

As yet the whole inhabitants of the land seem to have suffered from the Plagues, but now, when His hand is recognised, God makes a severance between Israel and the Egyptians, "that thou mayst know that I am the Lord in the midst of the earth" (Exodus viii, 22–23). This division would make a great impression on the Israelites, in giving them heart to believe that now their deliverance was at hand: and Aaron and the Elders of the people would have much to do in organising the preparations for the rapid exodus they were to make. Aaron, the Semitic leader of the rebellion of the "Harris Papyrus"—Aaron, the orator, with his persuasive tongue, would have much to do to get such a multitude ready. "600,000 footmen, besides children, and a mixed multitude, and flocks and herds and much cattle" (Exodus xii, 37–38). The Passover also had to be instituted. Only one well known amongst them could have persuaded them to do all that had to be done, assisted by fear, and seeing all the plagues coming on Egypt by command of this Moses so lately come amongst them, and part of them done by the hand of Aaron.

The Plagues came with increased rapidity as they neared the end. It reads as if the three days of "Darkness" were at once followed by the "Death of the First-born," immediately after which they were thrust out of Egypt. The Lambs for the Passover were set aside on the 10th Abib, and the Passover was on the 14th, three days of which time

would be spent by the Egyptians in "a thick darkness, even darkness which may be felt. They saw not one another, neither rose any from his place" (Exodus x, 21–23), but the Children of Israel, having light in their dwellings, would be able, unmolested, to make all arrangements for their departure.

It seems as if it were only at the last that Moses was recognised as *great* by the Egyptians; for when the locusts are threatened, Pharaoh's servants say, "How long shall this man be a snare unto us?" (Exodus x, 7). After the "Darkness," it is said, "Moreover the man Moses was *very great* in the land of Egypt, in the sight of Pharaoh's servants, and in the sight of the people (Exodus xi, 3). But if the 10th Plague followed immediately after the 9th, this "very great" was only of two or three days' growth. Aaron, the great speaker and leader amongst the Israelites for 30 or 40 years, would make the more enduring mark on men's minds, and his name would be well known. Moses came and passed before them only for a short time.

As we read on we find Moses had many struggles to go through before he was recognised, even by the Israelites, as their Leader. Before they had passed through the Red Sea they had begun the cry: "Because there were no graves in Egypt, hast thou taken us to die in this wilderness?" (Exodus xiv, 11). Six weeks after they had left Egypt, they were murmuring for the third time, and Moses said to *Aaron*: "Say unto the people, Come near before the Lord." At which time they first received Manna. On their fourth murmuring, Moses cried unto the Lord: "They be almost ready to stone me" (Exodus xvii, 4).

After the giving of the "Ten Commandments" Moses was called up into the Mount, where he remained 40 days (Exodus xxiv, 18). And when the people saw that Moses delayed to come down from the Mount, they gathered themselves together unto Aaron and said: "Up, make us gods, which shall go before us; for as for this Moses, the man that brought us up out of Egypt, we wot not what has become of him" (Exodus xxxii, 1).

Aaron may have thought that Moses' work (the deliverance from Egypt) being accomplished, he had disappeared back into the mountains where he had spent the previous 40 years. They arrived at Mount Sinai in the third month after leaving Egypt, and Moses had been absent 40 days, so it was quite natural for the people to come to Aaron, their old leader, and for him to act as such. He had not yet learned that God was a jealous God, "and would have no other gods before him," and thought he could manage the people by making a "golden calf," in imitation of the Sacred Bull, Apis, near to whose temple they had lived in Egypt. But when Moses re-appeared, scattering all before him, and with withering words said to Aaron: "What did the people unto thee, that thou hast brought so great a sin upon them?" (Exodus xxxii, 21), Aaron must have felt humiliated, and unable to withhold the sarcastic "My Lord" of his pointless answer; and then may have begun his jealousy of Moses, which culminated in Miriam and his speaking against

Moses, saying: "Hath the Lord indeed spoken only by Moses? Hath he not spoken also by us?" Miriam's being struck with leprosy was God's decisive reply to their boldness. Here, again, Aaron calls Moses "My Lord," but it is in entreaty, not in anger (Numbers xii). Ever after he seems to have been a faithful second to him.

Numbers xvi gives an account of the rebellion of Korah, a Levite, against Aaron having the priesthood, and Dathan and Abiram, of the tribe of Reuben, Jacob's first-born, against Moses having the leadership. When the two last were desired by Moses to come up to the Tabernacle, they said: "We will not come up. Is it a small thing that thou hast brought us up out of a land flowing with milk and honey to kill us in the wilderness, except thou make thyself altogether a prince over us?" Nearly the same answer as he got in Egypt more than 40 years before from one of the two Israelites who were quarrelling: "Who made thee a prince and a judge over us?" (Exodus ii, 14). The destruction of Korah, Dathan, Abiram, and their company, seems to have thoroughly broken the rebellious spirit of the people, and Moses is at last acknowledged their leader.

The above shows that Moses was very little with his own people *in Egypt.*

It was not till he was 40 years of age "that it come into his heart to visit them." The first day he "slew the Egyptian"; the second, finding it was known, he fled into Midian, where he remained 40 years.

God tells him "all the men are dead that sought thy life." He must have stayed away for fear of his life, and when he asks leave of Jethro to return to his brethren in Egypt, "and see whether they be yet alive," he can have had no intercourse with them, or he would not have given such a reason.

Six weeks were enough for the Plagues in Egypt, so his name could not have been much known. But Aaron, who had been amongst them all his life, a chief, a leader, a prophet, would be well known. Besides they were no mean set of slaves of small numbers, who struggled for freedom; for see what Pharaoh "of the oppression" says: "Behold the people of the Children of Israel *are more and mightier than we.* Come on, let us deal wisely with them, lest they multiply, and it come to pass, that when there falleth out any war, they join also unto our enemies, and fight against us, and so get them up out of the land." So spake Rameses the Great, and made their lives bitter with hard bondage in mortar, brick, and in all manner of service, and with rigour (Exodus i, 9–14).

Therefore, Aaron having spent his whole life in Egypt, a chief and leader of such a powerful body of people, must have been the Semitic leader of rebellion and emigration mentioned as "Areos," "Arisu," or "Aarsu," in the Harris Papyrus.

(*To face p.* 231.)

Deduced from observations taken at Tiberias, by Mr. WISEMAN, at about 652 feet below t
Latitude, 32° 48′ N

Months.	Pressure of atmosphere in month—corrected to 32° Fahrenheit.							Temperature of the air in mo				
	Highest.	Lowest.	Range.	Mean at 8½ a.m.	Mean at 4 p.m.	Lower reading at 4 p.m. than at 8 a.m.	Mean at 8 a.m. and 4 p.m.	Highest.	Lowest.	Range.	Mean of all highest.	Mean of all lowest.
1895.	in.	in.	in.	in.	in.	in.	in.	°	°	°	°	°
January	31·099	30·452	0·647	30·833	30·755	0·078	30·794	78·0	41·0	37·0	68·2	47·4
February	30·839	30·308	0·531	30·685	30·608	0·077	30·646	81·0	45·0	36·0	71·2	50·0
March	30·851	30·294	0·557	30·596	30·581	0·015	30·589	84·0	40·0	44·0	72·2	48·3
April	30·877	30·303	0·574	30·591	30·495	0·096	30·543	91·0	51·0	40·0	80·3	55·3
May	30·896	30·376	0·520	30·631	30·549	0·082	30·590	105·0	50·0	55·0	91·7	61·7
June	30·767	30·334	0·433	30·576	30·472	0·104	30·524	108·0	61·0	47·0	97·1	67·3
July	30·519	30·263	0·256	30·438	30·354	0·084	30·396	109·0	69·0	40·0	100·9	71·7
August	30·520	30·200	0·320	30·420	30·326	0·094	30·373	106·0	70·0	36·0	101·3	73·8
September	30·788	30·330	0·458	30·600	30·534	0·066	30·567	106·0	61·0	45·0	92·8	69·5
October	30·787	30·488	0·299	30·642	30·565	0·077	30·603	100·0	58·0	42·0	87·2	63·0
November	31·028	30·481	0·547	30·770	30·686	0·084	30·728	95·0	48·0	47·0	77·5	56·1
December	31·091	30·415	0·676	30·749	30·696	0·053	30·723	77·0	43·0	34·0	68·1	51·2
Means	30·839	30·354	0·485	30·628	30·552	0·076	30·590	95·0	53·1	41·9	84·0	59·6
	1	2	3	4	5	6	7	8	9	10	11	12

EOROLOGICAL TABLE

e level of the Mediterranean, and 30 feet above the level of the Sea of Galilee, open on all sides.
.; Longitude, 35° 34′ E.

		8 a.m.								4 p.m.								Rain.	
		Mean reading.			Vapour.					Mean reading.			Vapour.						
Mean daily range.	Mean.	Dry bulb.	Wet bulb.	Dew point.	Elastic force of vapour.	Weight in a cubic foot of air.	Additional weight required for saturation.	Degree of humidity.	Weight of a cubic foot of air.	Dry bulb.	Wet bulb.	Dew point.	Elastic force of vapour.	Weight in a cubic foot of air.	Additional weight required for saturation.	Degree of humidity.	Weight of a cubic foot of air.	Number of days on which it fell.	Amount collected.
°	°	°	°	°	in.	grs.	grs.	°	grs.	°	°	°	in.	grs.	grs.	°	grs.		in.
20·8	57·8	57·8	51·3	45·4	·304	3·4	2·0	63	551	64·3	56·2	49·5	·353	3·9	2·7	59	543	2	0·45
21·2	60·6	61·5	56·7	52·6	·396	4·4	1·7	73	544	67·6	59·3	52·7	·399	4·4	3·1	59	537	5	0·61
23·9	60·3	61·3	56·3	52·0	·388	4·3	1·7	72	543	67·5	58·6	51·5	·382	4·2	3·2	56	535	14	2·74
25·0	67·8	67·5	63·4	60·2	·522	5·7	1·7	77	535	76·0	67·8	61·9	·554	5·9	3·7	62	525	6	3·04
30·0	76·7	74·8	69·3	65·3	·625	6·7	2·6	72	528	87·9	74·4	65·7	·635	6·7	7·3	48	514	4	0·26
29·8	82·2	80·8	72·4	66·7	·652	7·0	4·2	62	521	91·9	72·9	61·2	·539	5·7	10·0	36	510	0	0·00
29·2	86·3	84·6	78·7	74·8	·845	8·7	3·5	2	514	96·4	81·4	72·5	·800	8·3	9·6	46	502	0	0·00
27·5	87·6	86·0	79·4	75·1	·875	9·2	4·1	70	512	97·3	82·4	73·7	·832	8·5	9·8	47	501	0	0·00
23·3	81·2	93·7	73·6	66·9	·660	7·0	5·3	57	519	89·7	73·0	62·6	·565	5·9	8·8	40	513	0	0·00
24·2	75·1	75·2	68·2	63·2	·580	6·3	3·2	66	528	82·9	70·1	61·5	·547	5·8	6·2	49	520	3	1·13
21·4	66·8	65·2	59·9	55·6	·442	4·8	2·4	72	542	74·6	64·4	57·0	·467	5·1	4·2	54	531	8	2·39
16·9	59·7	61·8	57·1	53·1	·403	4·5	1·6	73	545	65·1	59·1	54·2	·419	4·6	2·2	68	540	6	3·76
24·4	71·8	71·7	65·5	60·9	·558	6·0	2·8	69	532	80·1	68·3	60·3	·541	5·7	5·9	52	523	sum. 48	sum. 14·37
13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32

RESULTS OF METEOROLOGICAL OBSERVATIONS TAKEN AT TIBERIAS IN THE YEAR 1895.

By James Glaisher, F.R.S.

The numbers in column 1 of this table show the highest reading of the barometer in each month; the highest appear in the winter, and the lowest in the summer months; the maximum for the year was 31·099 inches, in January, and the next in order 31·091 inches, in February.

In column 2 the lowest reading in each month is shown; the minimum for the year was 30·200 inches, in August; and the next in order 30·263 inches, in July.

The range of readings in the year was 0·899 inch. The range in the morning observations was 0·805 inch, being 0·131 inch greater than the range at Jerusalem.

The numbers in the 3rd column show the extreme range of readings in each month; the smallest was 0·256 inch, in July, and the next in order 0·299 inch, in October; the largest was 0·676 inch, in December, and the next in order 0·647 inch, in January.

The numbers in columns 4 and 5 show the mean monthly reading of the barometer at 8 a.m. and 4 p.m.; and those in column 6 the lower reading at 4 p.m. than at 8 a.m.; the smallest difference between these two readings was 0·015 inch, in March, and the next in order 0·053 inch, in December; the largest was 0·104 inch, in June, and the next in order 0·096 inch, in April. In England in January the readings at 8 a.m. and 4 p.m. are practically the same; in all other months the reading at 4 p.m. is lower than at 8 a.m.; the greatest difference is in June, 0·025 inch. The mean for the year at Tiberias was 0·076 inch, being nearly four times greater than in England.

The numbers in the 7th column show the mean monthly pressure of the atmosphere; the highest was 30·794 inches, in January, and the next in order 30·728 inches, in November; the lowest was 30·373 inches, in August, and the next in order 30·396 inches, in July. The mean for the year was 30·590 inches.

The highest temperature of the air in each month is shown in column 8. The first day in the year the temperature reached 90° was on April 8th, and there was 1 other day in April when the temperature reached or exceeded 90°; in May, 18 days; in June, 28 days; in July and August it reached or exceeded 90° on every day; in September, 27 days; in October, 10 days; and in November on 1 day; thus the temperature reached or exceeded 90° on 148 days during the year. At Jerusalem the temperature did not reach 90° till May 23rd, and there were only 35 days in the year on which the temperature was as high as 90°. At Tiberias the temperature was 104° on May 22nd, and reached or exceeded 100° on 6 other days in this month; in June on 11 days; in July on 19 days; in August

on 26 days ; in September on 7 days ; and in October on 1 day ; thus on 71 days in the year the temperature reached or exceeded 100°. The highest temperature in the year at Tiberias was 109°, on July 9th ; at Jerusalem the highest in the year was 97°, on both June 14th and September 22nd.

The lowest temperature of the air in each month is shown in column 9. The lowest in the year was 40°, on March 4th ; the next lowest was 41° on January 19th ; and from March 5th to the end of the year there was no temperature so low as 41° ; the nearest approach being 43° on December 11th. At Jerusalem the lowest in the year was 30° on both January 19th and 20th ; and there were 57 nights in the year when the temperature was as low or lower than 40°.

The yearly range of temperature was 69° ; at Jerusalem it was 67°.

The range of temperature in each month is shown in column 10 ; and these numbers vary from 34° in December to 55° in May.

In column 11 the mean of all the high day temperatures in each month is shown. The lowest was 68°·1 in December, being 10° higher than that at Jerusalem ; the next in order were 68°·2 in January, and 71°·2 in February ; the highest was 101°·3 in August ; and the next in order 100°·9 in July, and 97°·1 in June. At Jerusalem the lowest were 53°·8 in January, 58°·1 in December, and 60°·3 in March ; the highest were 88°·2 in both July and August, and 83°·8 in September. The mean for the year at Tiberias was 84° ; at Jerusalem it was 72°·3.

In column 12 the mean of all the low night temperatures in each month is shown ; the lowest was 47°·4 in January ; the next in order were 48°·3 in March, and 50° in February ; the highest was 73°·8 in August ; and the next in order were 71°·7 in July, and 69°·5 in September. At Jerusalem the lowest were 36°·2 in January, 39°·6 in February, and 41°·2 in March ; the highest were 64°·3 in July, 62°·9 in August, and 59°·3 in June. At Tiberias the yearly value was 59°·6 ; at Jerusalem it was 51°·2.

In column 13 the mean daily range of temperature is shown in each month ; the smallest was 16°·9 in December, the next in order were 20°·8 in January, and 21°·2 in February ; the greatest was 30° in May, the next in order were 29°·8 in June, and 29°·2 in July. At Jerusalem the smallest were 13°·3 in December, 17°·6 in January, and 19°·1 in March. At Tiberias the mean daily range for the year was 24°·4 ; at Jerusalem it was 21°·1.

The mean temperature of the air, as found from the maximum and minimum temperatures only, is shown in each month in column 14. The lowest was 57°·8 in January ; and the next in order were 59°·7 in December, and 60°·3 in March ; the highest was 87°·6 in August ; and the next in order were 86°·3 in July, and 82°·2 in June. At Jerusalem the lowest temperatures were 45° in January, 50°·2 in February, and 50°·7 in March ; the highest were 76°·3 in July, 75°·5 in August, and 71°·2 in September. At Tiberias the mean temperature increased from January to February, decreased from February to March, and increased

month by month to the maximum in August, then decreased month by month to the end of the year. At Jerusalem the mean temperature increased from January month by month to the maximum in July, then decreased month by month to the end of the year. At Tiberias the yearly value was 71°·8 ; at Jerusalem it was 61°·8.

The numbers in the 15th and 16th columns are the mean readings of a dry and wet-bulb thermometer, taken daily at 8 a.m. If those in column 15 be compared with those in column 14, it will be seen that those in column 15 were of the same value in January, a little higher in February, March, September, October, and December, and a little lower in all other months. The mean for the year was 71°·7, being 0°·1 less than the mean of the year as determined by the use of the maximum and minimum thermometers. In the year 1890 the mean of the dry-bulb was 1°·1 lower than that of the maximum and minimum thermometers ; in 1891 it was 1°·5 lower ; in 1892, 0°·4 higher ; in 1893, 0°·7 lower ; and in 1894, 0°·5 lower ; the mean of the six differences is 0°·6 ; and therefore the mean temperature of the year may be approximately determined by a single reading of the thermometers taken daily at 8 a.m.

The numbers in the 17th column are the temperature of the dew-point, or that temperature at which the air would be saturated by the quantity of vapour mixed with it ; the smallest difference between these numbers and those in column 15 was 7°·3 in April ; the smallest from May to November was 9°·5 in May, and the largest, 16°·8, in September.

The numbers in column 18 show the elastic force of vapour, or the length of a column of mercury in inches corresponding to the pressure of vapour ; the smallest was 0·304 inch, in January, and the largest 0·875 inch, in August.

In column 19 the weight in grains of the water in a cubic foot of air is shown ; it was as small as 3·4 grains in January, and as large as 9·2 grains in August.

In column 20 the additional quantity of water required to saturate a cubic foot of air is shown ; it was as small as 1·6 grain in December, and as large as 5·3 grains in September.

The numbers in column 21 show the degree of humidity of the air, saturation being represented by 100 ; the largest numbers appear in April, February, and December, and the smallest from May to September, the smallest of all was 57 in September.

The numbers in column 22 show the weight in grains of a cubic foot of air, under the mean atmospheric pressure, temperature, and humidity of the air ; the largest number was in January, decreasing to the smallest in August, then increasing to the end of the year.

In columns 23 and 24 are the mean readings of a dry and wet-bulb thermometer taken daily at 4 p.m. By comparing the numbers in column 15 with those in column 23, the increase of temperature from 8 a.m. to 4 p.m. is shown ; in December the increase was only 3°·3, and in May it was as much as 13°·1.

In column 25 the temperature of the dew point at 4 p.m. is shown.

By comparing these numbers with those numbers in column 17, it will be seen that the temperature of the dew point in the months of January, February, April, May, November, and December was higher than at 8 a.m., and lower than at 8 a.m. in the remaining months. The numbers in this column are smaller than those in column 23, by 14°·1 in April, increasing to 30°·7 in June, then decreasing to 10°·9 in December; these differences between the temperature of the air and that of the dew point are very much larger than those at 8 a.m.; in June, July, and August it was more than twice as large.

On several days in the months of May and June, at 4 p.m., the reading of the dry-bulb thermometer exceeded that of the wet by 25° or more, and the temperature of the dew point was from 40°·8 to 49°·9 lower than the temperature of the air, as shown by the following table :—

Month and Day.	Reading of		Temperature of the Dew Point.	Temperature of the Dew Point below Dry.
	Dry.	Wet.		
	°	°	°	°
May 22	103·0	71·0	53·1	49·9
23	102·0	72·0	55·2	46·8
27	104·0	77·0	62·1	41·9
June 4	105·0	74·0	57·3	47·7
5	100·0	74·0	59·2	40·8
8	100·0	70·0	52·9	47·1
9	103·0	73·0	56·2	46·8
13	105·0	74·0	57·3	47·7

In column 26 the elastic force of vapour is shown, and by comparing the values with those in the same month at 8 a.m. we find that it was smaller at 4 p.m. in March and in the months from June to October, and larger than at 8 a.m. in the remaining months.

In column 27 the amount of water in a cubic foot of air at 4 p.m. is shown, and the amount was less than at 8 a.m. in March, and in the months from June to October.

In column 28 the amount of water required to saturate a cubic foot of air was as large as 10 grains in June, 9·8 grains in August, and 9·6 grains in July; and smaller than 3 grains in January and December.

In column 29 the degree of humidity is shown; the driest months were from May to September, the value for these months varying from 36 in June to 47 in August.

In column 30 the weight of a cubic foot of air is shown, the smallest was 501 grains in August, and the largest, 543 grains in January.

In column 31 are given the number of days of rain in each month; the largest was 14 in March. The total number in the year was 48. At Jerusalem rain fell on 52 days.

(*To face p.* 235.)

MONTHLY METEOR

Deduced from observations taken at Jerusalem, by Joseph Gamel, in a garden, well withi
Latitude, 31° 46′ 40″ N.,

Months.	Pressure of atmosphere in month—Corrected to 32° Fahrenheit.				Temperature of the air in month at 9 a.m.							Mean
	Highest.	Lowest.	Range.	Mean.	Highest.	Lowest.	Range.	Mean of all highest.	Mean of all lowest.	Mean daily range.	Mean.	Dry bulb.
1895.	in.	in.	in.	in.	°	°	°	°	°	°	°	°
January	27·687	27·236	0·451	27·465	59·2	30·0	29·2	53·8	36·2	17·6	45·0	49·3
February	27·509	27·163	0·346	27·379	72·8	32·0	40·8	60·8	39·6	21·2	50·2	54·5
March	27·455	27·018	0·437	27·448	80·5	32·5	48·0	60·3	41·2	19·1	50·7	52·3
April	27·537	27·079	0·458	27·331	81·2	43·5	37·7	70·8	51·6	19·2	61·2	63·9
May	27·551	27·252	0·299	27·405	93·8	45·0	48·8	79·8	58·2	21·6	69·0	72·9
June	27·478	27·260	0·218	27·361	97·0	50·0	47·0	82·2	59·3	22·9	70·8	76·0
July	27·345	27·161	0·184	27·277	96·5	58·5	38·0	88·2	64·3	23·9	76·3	81·8
August	27·325	27·162	0·163	27·247	95·8	58·0	37·8	88·2	62·9	25·3	75·5	79·6
September	27·493	27·245	0·248	27·389	97·0	50·0	47·0	83·8	58·6	25·2	71·2	75·5
October	27·508	27·313	0·195	27·395	85·5	45 0	40·5	75·9	51·9	24·0	63·9	69·1
November	27·692	27·237	0·455	27·455	86·0	39·0	47·0	66·1	46·4	19·7	56·2	60·1
December	27·647	27·173	0·474	27·429	66·5	34·5	32·0	58·1	44·8	13·3	51·5	52·6
Means	27·519	27·191	0·327	27·382	84·3	43·2	41·1	72·3	51·2	21·1	61·8	65·6
	1	2	3	4	5	6	7	8	9	10	11	12

ROLOGICAL TABLE

in the city, about 2,500 feet above the level of the Mediterranean Sea, open on all sides.
Longitude, 35° 13′ 30″ E.

reading at 9 a.m.		Vapour at 9 a.m.			Degree of humidity.	Weight of a cubic foot of air.	Wind. Relative proportions of.								Mean amount of cloud.	Rain.	
Wet bulb.	Dew point.	Elastic force of vapour.	Weight in a cubic foot of air.	Additional weight required for saturation.			N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.		Number of days on which it fell.	Amount collected.
°	°	in.	grs.	grs.	°	grs.											in.
43·8	37·9	·229	2·6	1·4	65	500	0	13	8	1	0	2	4	3	3·5	6	0·90
48·9	43·5	·282	3·2	1·6	67	493	0	2	0	1	1	7	10	7	5·8	7	3·07
48·1	43·8	·286	3·3	1·2	73	496	0	3	1	0	2	7	9	9	6·6	13	5·94
55·3	48·1	·336	3·7	2·9	57	483	0	2	0	2	1	10	11	4	5·5	7	1·84
64·4	58·1	·485	5·2	3·5	59	475	3	5	2	1	1	7	3	9	3·7	1	0·12
66·7	60·2	·519	5·6	4·1	58	472	0	4	0	0	0	5	4	17	2·0	0	0·00
71·3	64·2	·601	6·4	4·6	55	465	2	3	1	1	1	1	4	18	0·6	0	0·00
70·8	64·8	·604	6·6	4·3	60	466	0	0	0	0	0	1	8	22	1·0	0	0·00
65·8	58·9	·498	5·4	4·2	56	473	1	6	1	2	0	3	5	12	1·1	0	0·00
61·4	55·4	·439	4·8	3·0	61	479	1	9	1	1	0	3	6	10	3·4	2	0·41
55·0	50·5	·368	4·1	1·7	70	488	2	9	4	1	0	4	2	8	4·3	10	3·73
49·9	47·3	·326	3·7	0·8	82	496	6	2	1	1	0	10	5	6	5·7	6	7·24
58·5	52·7	·414	4·5	2·8	64	482	sum. 15	sum. 58	sum. 19	sum. 11	sum. 6	sum. 60	sum. 71	sum. 125	3·6	sum. 52	sum. 23·25
13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30

In column 32 the monthly fall of rain is given. The heaviest fall of rain on one day in the months from January to April was 1·48 inch, on April 10th; and the next in order 0·95 inch on April 11th. No rain fell from May 16th till October 6th, making a period of 142 consecutive days without rain. The fall of rain on December 23rd was 0·92 inch, and 0·85 inch and 0·89 inch fell on the 10th and 11th respectively. The heaviest monthly fall in the year was 3·76 inches, in December, and the next in order, 3·04 inches in March. The total fall of rain for the year was 14·37 inches. At Jerusalem the total fall for the year was 23·25 inches.

RESULTS OF METEOROLOGICAL OBSERVATIONS TAKEN AT JERUSALEM IN THE YEAR 1895.

By James Glaisher, F.R.S.

The numbers in column 1 of this table show the highest reading of the barometer in each month; of these the highest, as usual, are in the winter, and the lowest in the summer months; the maximum for the year was 27·692 inches, in November, and the next in order, 27·687 inches, in January. The highest reading in the preceding 34 years, viz., 1861 to 1894 inclusive, was 27·816 inches, in December, 1879.

In column 2 the lowest reading of the barometer in each month is shown; the minimum for the year was 27·018 inches, in March, and the next in order, 27·079 inches, in April. The lowest reading in the preceding 34 years was 26·972 inches, in April, 1863, and February, 1865.

The numbers in the 3rd column show the extreme range of readings in each month; the smallest was 0·163 inch, in August, and the next in order, 0·184 inch, in July; the largest was 0·474 inch, in December; and the next in order, 0·458 inch, in April. The mean monthly range for the year was 0·327 inch. The mean for the preceding 34 years was 0·309 inch.

The range of barometer readings in the year was 0·674 inch. The largest range in the preceding 34 years was 0·742 inch, in 1872; and the smallest, 0·491 inch, in 1883.

The numbers in the 4th column show the mean monthly pressure of the atmosphere; the highest was 27·465 inches, in January, and the next in order, 27·455 inches, in November; the lowest was 27·247 inches, in August, and the next in order, 27·277 inches, in July. The mean yearly pressure was 27·382 inches. The highest mean yearly pressure in the preceding 34 years was 27·443 inches, in 1861, and the lowest, 27·358 inches, in 1892. The mean for the 34 years was 27·389 inches.

The temperature of the air reached 90° on May 23rd, and there were 4 other days in May when the temperature reached or exceeded 90°. In the preceding 13 years the earliest day in the year the temperature

was 90° was March 25th in the year 1888; in June it reached or exceeded 90° on 5 days; in July, on 9 days; in August, on 10 days; and in September, on 6 days; the 29th being the last day in the year of a temperature as high as 90°. In the preceding 13 years the latest day in the year this temperature reached 90° was October 23rd, 1887. The temperature reached or exceeded 90° on 35 days during the year. In the year 1892 the number of days of this high temperature was 23, and in 1887 was 73; the average of the 13 years was 40. The highest temperature in the year was 97° on both June 14th and September 22nd; the highest in the preceding 13 years, viz., 1882 to 1894, was 108°, in June, 1894.

The temperature of the air was as low as 30° on both January 19th and 20th; and was as low or lower than 40° on 24 other nights in January; in February on 14 nights; in March on 14 nights; in November on 1 night; and in December on 2 nights. Thus the temperature was as low or lower than 40° on 57 nights during the year. In the year 1892 the number of nights of this low temperature was 19, and in 1894 was 113, the average for the 13 years was 55.

The highest temperature of the air in each month is shown in column 5. In January it was 59°·2, being the lowest in the year, and 1°·5 below the mean of the 13 high day temperatures in January. The high day temperature was also below its average in April, June, July, August, October, and December, and above in the remaining months. The mean for the year was 84°·3, being 0°·3 above the average for 13 years.

The lowest temperature of the air in each month is shown in column 6. In January it was 30°, being the lowest in the year, and 1°·6 below the average. The low night temperature was also below its average in February, March, May, June, August, September, October, and November; and above in April, July, and December. The mean for the year was 43°·2, being 1°·1 below the average of 13 years.

The range of temperature in each month is shown in column 7; the numbers vary from 29°·2 in January to 48°·8 in May. The mean range for the year was 41°·1, being 1°·4 greater than the average of 13 years.

The range of temperature in the year was 67°. The largest in the preceding 13 years was 81° in 1894; and the smallest, 63°·5 in the year 1885.

The mean of all the high day temperatures in each month is shown in column 8. The lowest was 53°·8 in January, being 2°·9 higher than the average. The highest was 88°·2 in both July and August, being 0°·2 above its average in July, and 1° below in August. The mean for the year was 72°·3, being 0°·1 above the average of 13 years.

The mean of all the low night temperatures in each month is shown in column 9. The lowest was 36°·2 in January, being 2°·2 lower than the average; the highest was 64°·3 in August, being 0°·1 higher than the average. The mean for the year was 51°·2, or 1°·1 below the average of 13 years.

In column 10 the mean daily range of temperature in each month is

shown ; the smallest was 13°·3 in December ; and the next in order, 17°·6 in January ; the greatest was 25°·3, in August, and the next in order 25°·2 in September. The mean for the year was 21°·1, being 1°·2 greater than the average. The smallest ranges in the preceding 13 years were 9°·3, in January, 1883, and 9°·7, in December, 1890 ; the greatest were 33°·8, in August, 1886 ; and 30°·1, in the same month of 1887. The smallest mean for the year was 17°·8, in 1883 ; and the greatest, 24°·3, in 1886.

The mean temperature of the air, as found from the maximum and minimum temperatures only, is shown in each month in column 11 ; the lowest was 45° in January ; and the next in order, 50°·2 in February ; the highest was 76°·3 in July ; and the next in order, 75°·5 in August. The mean for the year was 61°·8 being 0°·5 below the average of 13 years. The lowest mean temperatures in the preceding 10 years were 39°·8, in January, 1890 ; and 42°, in December, 1886 ; the highest were 81°·2, in August, 1890, and 81°·1, in July, 1888. The highest mean for the year was 63°·7, in 1885, and the lowest 60°, in 1894.

January was the coldest month of the year, and was below its average both by day and night ; the nights were mostly cold and below their average throughout the year.

The numbers in column 12 are the mean readings of a dry-bulb thermometer. If those in column 12 be compared with those in column 11, it will be seen that those in column 12 are a little higher in every month, the difference of the means for the year being 3°·8 ; the mean difference between the mean temperature of the air and that at 9 a.m. for the 13 years was 3°·4.

For a few days in the winter months the dry and wet-bulb thermometers read alike, or nearly so, but in the months from May to October the difference between the readings often exceeded 15°, and was as large as 19° on August 27th.

In column 13 the mean monthly readings of the wet-bulb are shown, the smallest differences between these and those of the dry-bulb were 2°·7, in December, and 4°·2, in March ; the largest were 10°·5, in July, and 9°·7, in September. The mean for the year was 58°·5, and that of the dry 65°·6 ; the mean difference was 7°·1.

The numbers in column 14 are the temperature of the dew point, or that of the temperature at which the air would be saturated by the quantity of vapour mixed with it ; the smallest difference between these numbers and those in column 12, were 5°·3 in December, and 8°·5 in March ; and the largest were 17°·6 in July, and 16°·6 in September. The mean temperature of the dew point for the year was 52°·7 ; the mean for the 13 years was 50°·1.

The numbers in column 15 show the elastic force of vapour, or the length of a column of mercury in inches corresponding to the pressure of vapour ; the smallest was 0·229 inch, in January ; and the largest 0·604 inch, in August. The mean for the year was 0·414 inch ; the average of the 13 years was 0·374 inch.

In column 16 the weight in grains of the water present in a cubic

foot of air is shown; it was as small as 2·6 grains in January, and as large as 6·6 grains in August. The mean for the year was 4·5 grains; the average of 13 years was 4·1 grains.

In column 17 the additional quantity of water required to saturate a cubic foot of air is shown; it was less than 1 grain in December, and more than 4½ grains in July. The mean for the year was 2·8 grains; the average of 13 years was 3·4 grains.

The numbers in column 18 show the degree of humidity, saturation being represented by 100; the largest numbers appear in January, February, March, November, and December, and the smallest from April to October; the smallest of all was 55 in July. The mean for the year was 64; that of the 13 years was 59.

The numbers in column 19 show the weight in grains of a cubic foot of air, under its mean atmospheric pressure, temperature, and humidity. The largest number was in January, decreasing to the smallest in July, then increasing to December. The mean for the year was 482 grains; that of the 13 years being of the same value.

The most prevalent winds in January were N.E. and E., and the least were N. and S.; the most prevalent in February were S.W., W., and N.W., and the least were N. and E.; the most prevalent in March were W., N.W., and S.W., and the least were N. and S.E.; the most prevalent in April were S.W. and W., and the least were N. and E.; the most prevalent in May were N.W. and S.W., and the least were S.E. and S.; the most prevalent in June was N.W., and the least were N., E., S.E., and S.; the most prevalent wind in July was N.W., and the least were E., S.E., S., and S.W.; the most prevalent in August was N.W., and the least were N., N.E., E., S.E., and S.; the most prevalent in September and October were N.W. and N.E., and the least prevalent was S.; the most prevalent in November were N.E. and N.W., and the least was S.; the most prevalent in December was S.W., and the least was S. The most prevalent wind in the year was N.W., which occurred on 125 times, of which 22 were in August, 18 in July, and 17 in June, and the least prevalent wind was S., which occurred on only 6 times during the year, of which 2 were in March, and one in each of the months of February, April, May, and July.

The total number of times of each wind are shown in the last line of columns 20 to 27; those winds less in number than the average of the preceding 13 years were—

N.	by	14
E.	„	12
S.E.	„	14
S.	„	4

and those winds greater in number than the average of 13 years were—

N.E.	by	19
S.W.	„	7
W.	„	5
N.W.	„	13

The numbers in column 28 show the mean amount of cloud in each month; the month with the smallest amount is July, and the largest February. Of the cumulus or fine weather cloud there were 4 instances; of the nimbus or rain cloud there were 29 instances, of which 9 were in March, 6 in February, 4 in December, and only 1 from June to October; of the cirrus there were 23 instances; of the cirro cumulus 78 instances, of which 11 were in October, 10 in January, and 9 in both February and April; of the cumulus stratus 41 instances; of the cirrus stratus 32 instances; of the stratus 3 instances; and 155 instances of cloudless skies, of which 27 were in July, 26 in August, and 19 in June, and 4 only in both February and March.

The largest fall of rain for the month in the year was 7·24 inches, in December, of which 2·28 inches fell on the 12th, 2·24 inches on the 24th, 1·26 inch on the 13th, and 1·23 inch on the 11th. The next largest fall for the month was 5·94 inches, in March, of which 1·20 inch fell on the 25th, 1·13 inch on the 29th, and 1·05 inch on the 10th. No rain fell from May 17th till October 8th, making a period of 143 consecutive days without rain. The total fall of rain for the year was 23·25 inches, being 2·43 inches below the average of 34 years, viz., 1861 to 1894. The number of days on which rain fell was 52, being 3 less than the average.

Note by Sir Charles Wilson, *on the Mosaic at Mâdeba* (p. 213).

"Special interest attaches to the plan of the City of Jerusalem given in the mosaic. It is difficult to read the plan from the photographs, but it apparently gives a street lined with columns running from the Damascus Gate to the old Sion Gate, another down the valley, *el Wad*, to the present Dung Gate, a third running from el Wad to the present St. Stephen's Gate, and a fourth running eastward from the Jaffa Gate. Near the Damascus Gate, at the northern end of the central street, is a column (*amûd*), possibly the *milion* from which distances were counted. On the west side of the street, leading to the Sion Gate, is apparently the porch of Constantine's Church, and the church itself seems to be indicated in outline. Possibly when the drawings, which are now being made for the German Palestine Society, come to hand, more light may be thrown on the disputed questions connected with the topography of Jerusalem."

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THE
PALESTINE EXPLORATION FUND.

NOTES AND NEWS.

The Firman for excavating at Jerusalem having terminated on 20th June Dr. Bliss came at once to England, and was present at the annual meeting. His final report is published in the present number, and he is now engaged in preparing for publication a memoir of his three years' work and its results.

The work of exploration in Palestine by means of excavations is full of promise, and funds are greatly needed in order that opportunities which present themselves may be utilised. The remarkable success which has attended the excavations at Tell el Hesy and Jerusalem is sufficient indication of the important results which may be expected from such investigations if judiciously and perseveringly conducted.

Dr. Schick reports that in consequence of the heavy rains last winter a house in the Armenian quarter fell and a woman who was in it was killed. The upper chamber first fell and broke in the floor of the room below, causing the poor woman and her bed to fall into a cistern which was underneath.

New shops have been built by the Armenian convent and by Mohammedans within the city south of the Jewish quarter and east of Bab Nebi Daûd, and Dr. Schick has made use of the opportunity afforded during the progress of improvements in that neighbourhood to examine carefully the *Columbarium* discovered there by Sir Charles Warren, which was subsequently used as a cistern.

Dr. Schick also writes of what he calls "remains of an ancient city wall" running northward from Burj el Kibryt. His account of these observations will be published in a future number.

With reference to Professor Theodore Wright's note on "The Swastica," in the *Quarterly Statement* for April last, p. 153, Miss Congreve, of Torquay, directs attention to a paper by John Newton, M.R.C.S.E., published in the "Proceedings of the Literary and Philosophical Society of Liverpool," No. xxxiv (1889), in which, facing p. 224, a drawing is given showing the

The "Fylfot" or "Suastika."

"origin of the 'fylfot' or 'suastika' by leaving out part of the rim of the sun-wheel."

The income of the Society, from June 24th, 1897, to September 18th, 1897, was—from annual subscriptions and donations, including Local Societies, £249 6*s.* 3*d.*; from Lectures, £3 17*s.* 6*d.*; from sales of publications, &c., £146 17*s.* 7*d.*; total, £400 1*s.* 4*d.* The expenditure during the same period was £308 9*s.* 2*d.* On September 18th the balance in the Bank was £229 12*s.* 2*d.*

Dr. Post's "Flora of Syria, Palestine, and Sinai" is now ready, and may be obtained on application to the author at Beirût.

The work embraces 126 orders, 850 genera, and 3,416 species, many of the latter, as well as numerous varieties, being new to science. It is illustrated by 445 woodcuts, and a coloured map, showing the botanical regions of the district covered. It contains a general analytical key to all the orders, and special keys to the larger tribes and genera. Much labour has been expended on these keys, and it is hoped that, by their means, the usefulness of the book will be greatly increased, especially for students and travellers.

Henry Turnbull, Esq., Grosvenor Road, Scarborough, has kindly consented to act as Honorary Local Secretary for Scarborough.

Memo. for Subscribers to the Survey of Palestine.—In the original programme it was intended that the "Archæological Researches" of M. Clermont-Ganneau should be published in one volume, but the work increased so much since its commencement that the Committee found it necessary to arrange for the publication of the whole in two volumes. Vol. II has been published in advance for the reasons stated in the prefatory note.

Vol. I, which treats of Jerusalem and its neighbourhood, is now well forward, and, when ready, will be sent out to the first 250 Subscribers without any increase in their subscriptions for the full set.

The set consists of "The Survey of Eastern Palestine," by Lieut.-Colonel Conder, LL.D., R.E., in one vol.; "The Fauna and Flora of Sinai, Petra, and the Wâdy 'Arabah," by H. Chichester Hart, B.A., in one vol.; "The

Archæological Researches," by Professor Clermont-Ganneau, in two vols. Four volumes in all.

There are only a few copies of the sets left at the price of £7 7*s*.

Lieut.-Colonel Conder's important work, "The Latin Kingdom of Jerusalem"—1099 to 1292 A.D.—describing the condition of Palestine under the Crusaders, was published in January. It is based on the chronicles and contemporary accounts, both Christian and Moslem, and on the information collected during the progress of the Survey, with descriptions of the scenes of the important events, and other information not to be found in previous histories of the Crusades. It forms an octavo volume of over 400 pages, with two maps, giving the Crusading names and boundaries of the "Fiefs" throughout Palestine.

A translation of Behâ ed Dîn's "Life of Saladin," A.D. 1145–1232, which forms the concluding volume of the Palestine Pilgrims' Text Series, is now being issued.

This translation has been compared with the original Arabic, and annotated by Lieut.-Colonel Conder, LL.D., R.E., with a preface and notes by Major-General Sir Charles Wilson, K.C.B., F.R.S., R.E.

Copies of the "Life of Saladin," bound in cloth, with an index, *can be had separately*. Price to Subscribers to the Fund, 6*s*. 6*d*.

Sir Charles Wilson writes in reference to the "Life of Saladin":—"The present volume closes the series of translations issued by the Palestine Pilgrims' Text Society, and I am glad to take this opportunity of conveying the thanks of the Committee to those gentlemen who have so kindly and readily given their assistance in translating, annotating, and editing the works. Without the cordial assistance of those gentlemen it would not have been possible to carry out the original programme of the Society, and place within the reach of English readers the more important of the records which the early and mediæval pilgrims have left of their pilgrimages to Jerusalem and the Holy Land. The Committee and the Society are also deeply indebted to the Hon. Secretary and Treasurer, who has done so much to further the interests of the work."

The price of a complete set of the translations published by the Society, in 13 volumes, with general index, bound in cloth, is £10 10*s*. A catalogue describing the contents of each volume can be had on application to the Secretary, 24, Hanover Square.

Livraison 15 of M. Clermont-Ganneau's "Recueil d'Archéologie Orientale," which has reached us, contains articles on the Statue of the Nabatean King Rabel I at Petra; a reliquary of the Crusades; the "cames" or *gîtes d'étape* of the Mamlook Sultans, &c.

Branch Associations of the Bible Society, all Sunday Schools within the Sunday School Institute, the Sunday School Union, and the Wesleyan

Sunday School Institute, will please observe that by a special Resolution of the Committee they will henceforth be treated as subscribers and be allowed to purchase the books and maps (by application only to the Secretary) at reduced price.

The Committee have to acknowledge with thanks the following donations to the Library of the Fund :—

"The Holy Land in Geography," vol. i; "The Holy Land in History," vol. ii. By Townsend MacCoun, A.M., New York. From the author.

The Committee will be glad to receive donations of Books to the Library of the Fund, which already contains many works of great value relating to Palestine and other Bible Lands. A catalogue of Books in the Library will be found in the July *Quarterly Statement*, 1893.

Mr. George Armstrong's Raised Map of Palestine is on view at the office of the Fund. A circular giving full particulars about it will be sent on application to the Secretary.

The third edition of the new Collotype Print or Photo-relief from a specially prepared copy of the Raised Map of Palestine is now ready. Price to subscribers, 2*s.* 3*d.*; non-subscribers, 3*s.* 3*d.*, post free.

The print is on thin paper, measuring 20 inches by 28½ inches.

The museum of the Fund, at 24, Hanover Square, is now open to subscribers between the hours of 10 a.m. and 5 p.m., every week-day except Saturdays, when it closes at 2 p.m.

It may be well to mention that plans and photographs alluded to in the reports from Jerusalem and elsewhere cannot all be published, but all are preserved in the office of the Fund, where they may be seen by subscribers.

While desiring to give publicity to proposed identifications and other theories advanced by officers of the Fund and contributors to the pages of the *Quarterly Statement*, the Committee wish it to be distinctly understood that by publishing them in the *Quarterly Statement* they neither sanction nor adopt them.

In order to make up complete sets of the *Quarterly Statement* the Committee will be very glad to receive any of the back numbers.

Subscribers who do not receive the *Quarterly Statement* regularly are asked to send a note to the Secretary. Great care is taken to forward each number to those who are entitled to receive it, but changes of address and other causes occasionally give rise to omissions.

The Committee of the Palestine Exploration Fund desire to make clear that they have no book on their List of Publications called "Picturesque Palestine," nor is any person authorised to represent this book as published by the Society; nor has the Society any book-hawkers in its employment.

TOURISTS are cordially invited to visit the Loan Collection of "Antiques" in the JERUSALEM ASSOCIATION ROOM of the Palestine Exploration Fund, opposite the Tower of David, Jerusalem. Hours: 8 to 12, and 2 to 6. Maps of Palestine and Palestine Exploration Fund publications are kept for sale.

Photographs of Dr. Schick's models (1) of the Temple of Solomon, (2) of the Herodian Temple, (3) of the Haram Area during the Christian occupation of Jerusalem, and (4) of the Haram Area as it is at present, have been received at the office of the Fund. Sets of these photographs, with an explanation by Dr. Schick, can be purchased by applying to the Secretary, 24, Hanover Square, W.

The authorised lecturers for the Society are—

AMERICA.

Professor Theodore F. Wright, Ph.D., 42, Quincy Street, Cambridge, Mass., Honorary General Secretary of the Palestine Exploration Fund for the United States. His subjects are as follows:—

(1) *The Building of Jerusalem.*
(2) *The Overthrow of Jerusalem.*
(3) *The Progress of the Palestine Exploration.*

ENGLAND.

The Rev. Thomas Harrison, F.R.G.S., The Vicarage, Appledore, Ashford, Kent. His subjects are as follows:—

(1) *Research and Discovery in the Holy Land.*
(2) *Bible Scenes in the Light of Modern Science.*
(3) *The Survey of Eastern Palestine.*
(4) *In the Track of the Israelites from Egypt to Canaan.*
(5) *The Jordan Valley, the Dead Sea, and the Cities of the Plain.*
(6) *The Recovery of Jerusalem*—(*Excavations in* 1894).
(7) *The Recovery of Lachish and the Hebrew Conquest of Palestine.*
(8) *Archæological Illustrations of the Bible.* (Specially adapted for Sunday School Teachers).

N.B.—All these Lectures are illustrated by specially prepared lantern slides.

The Rev. Charles Harris, M.A., F.R.G.S., Appledore, Ashford, Kent. (All Lectures illustrated by lantern slides.) His subjects are as follows:—

(1) *Modern Discoveries in Palestine.*
(2) *Stories in Stone; or, New Light on the Old Testament.*
(3) *Underground Jerusalem; or, With the Explorer in* 1895.
Bible Stories from the Monuments, or Old Testament History in the Light of Modern Research:—

(4) A. *The Story of Joseph; or, Life in Ancient Egypt.*
(5) B. *The Story of Moses; or, Through the Desert to the Promised Land.*
(6) C. *The Story of Joshua; or, The Buried City of Lachish.*
(7) D. *The Story of Sennacherib; or Scenes of Assyrian Warfare.*
(8) E. *The Story of the Hittites; or, A Lost Nation Found.*

SCOTLAND.

The Rev. James Smith, B.D., St. George's-in-the-West Parish, Aberdeen. His subjects are as follows:—

(1) *The Palestine Exploration Fund.*
(2) *A Pilgrimage to Palestine.*
(3) *Jerusalem—Ancient and Modern.*
(4) *The Temple Area, as it now is.*
(5) *The Church of the Holy Sepulchre.*
(6) *A Visit to Bethlehem and Hebron.*
(7) *Jericho, Jordan, and the Dead Sea.*

The Rev. W. Burnet Thomson, M.A., B.D., Galashiels, N.B. His subjects are as follows:—

(1) *The City of the Great King; or Jerusalem and the Explorer.*
(2) *The Temple, the Sepulchre, and Calvary.*
(3) *Southern Palestine.*
(4) *Jerusalem to Damascus.*
(5) *Palestine and Jesus Christ (for children).*
(6) *The Bible and the Monuments. Discoveries in Ancient Land.*

All illustrated with lantern slides.

WALES.

The Rev. J. Llewelyn Thomas, M.A., Aberpergwm, Glynneath, South Wales. His subjects are as follows:—

(1) *Explorations in Judea.*
(2) *Research and Discovery in Samaria and Galilee.*
(3) *In Bible Lands; a Narrative of Personal Experiences.*
(4) *The Reconstruction of Jerusalem.*
(5) *Problems of Palestine.*

Application for Lectures may be either addressed to the Secretary, 24, Hanover Square, W., or sent to the address of the Lecturers.

ANNUAL MEETING.

The Annual Meeting of the General Committee of the Palestine Exploration Fund was held at the Offices, Hanover Square, on Tuesday afternoon, July 20th, 1897. Mr. James Glaisher, F.R.S., presided.

There were present:—Walter Morrison, Esq., M.P.; William Simpson, Esq.; Canon Dalton, C.M.G.; Dr. W. Aldis Wright; Dr. Ginsburg, J.P.; J. D. Crace, Esq.; Colonel C. M. Watson, R.E., C.M.G.; Colonel Goldsmid; Guy le Strange, Esq.; H. C. Kay, Esq.; Rev. Professor Theodore F. Wright; Rev. Wm. Henry Rogers, D.D.; Colonel Farquharson, C.B., R.E.; Dr. Chaplin; Dr. Percy D'Erf Wheeler; Dr. F. J. Bliss; A. Campbell Dickie, Esq., &c.

Letters of apology regretting inability to attend were received from His Grace the Archbishop of Canterbury, Lord Northbrook, Lord Sidmouth, Major-General Sir Charles Wilson, K.C.B., Sir Walter Besant, Major-General Sir F. J. Goldsmid, Bishop Blyth of Jerusalem, Dr. Löwy, James Melrose, Esq., Rev. W. J. Stracey, Rev. Henry George Tomkins, Professor George Adam Smith, Rev. W. F. Birch, &c.

Canon Dalton read the Annual Report.

Gentlemen,

In resigning the office to which they were appointed at the last Annual Meeting, your Executive Committee beg to present the following Report:—

They have held twenty-four meetings for the transaction of business.

The chief work of the year has been that carried on by Dr. Bliss at Jerusalem.

Sir Charles Wilson writes:—

"Dr. Bliss's excavations during the last season have been carried out partly on the western hill and partly in the Tyropœon Valley.

"The excavations on the western hill have led to nothing decisive except that, possibly, the old street mentioned in the *Quarterly Statement* (October, 1896, p. 304) may give the line of the ancient street that ran from north to south through Jerusalem.

"In the Tyropœon Valley the limits of the upper Pool of Siloam have been determined, and portions of the rock-hewn steps which appear to have originally led down to it have been found. Above these rock-steps is a well-constructed stairway of large slabs of stone which are set in mortar. This stairway is connected with a street running north up the Tyropœon Valley, and gradually ascending the eastern hill. The stairway and street are evidently Roman and, as the former is said to be older than the Siloam Church, they may very possibly date from the time of Hadrian.

"The church which was known to have existed at Siloam has been discovered, and its plan, which presents several features of interest, has been ascertained. The high altar is immediately over the channel which conveys the water of the Fountain of the Virgin to the Pool; and the nave and choir apparently occupy part of the site of the northern stoa or portico. A possible explanation of the peculiarities observed in the construction is that the original church, like the Church of St. Mary in Probatica, was a small building without aisles erected in one of the stoæ or porticoes that surrounded the Pool. At a later date the church was rebuilt and enlarged, and the platform, &c., near the two pools rearranged. The first church may have been the work of the Empress Eudocia, or of Juvenal of Jerusalem, and the reconstructed and enlarged church that of Justinian.

"The street which has been followed for such a long distance up the Tyropœon Valley is apparently that by which the pilgrim Antoninus (570 A.D.) descended from the 'Double Gate' or 'Triple Gate' of the Haram to Siloam (Ant., xxiv). The drain found under the street may explain the passage in which Antoninus states (xxiii) that 'In front of the ruins of the Temple of Solomon, under the street, water runs down to the Fountain of Siloam.' If Antoninus left the Temple enclosure by the 'Triple Gate' the 'putrid water into which the prophet Jeremias was sent' would in this case be the channel under that gate.

"The street is clearly Roman and no trace appears to have been found of the street which in Herodian and præ-exilic times led from Siloam to the Temple or up the Tyropœon Valley.

"The section across the valley in the *Quarterly Statement* for July, 1897, though it has not brought to light anything of archæological interest, is of great value, and will enable the natural features of the valley to be constructed with much greater accuracy than has hitherto been possible.

"The search for traces of the wall, which must at one period have run along the cliff east of Siloam, has been unsuccessful. But a wall and scarp were found running northwards from the dam of the lower Pool to the west end of the church. It would almost seem that the old wall crossed the valley at, or immediately north of, the church; but the information with regard to the levels is not at present sufficient to throw light on this point.

"It seems probable that the lower Pool of Siloam is the *mikvah* (ditch, R.V. reservoir) which Hezekiah made 'between the two walls for the water of the old Pool' (Isaiah xxii, 11). Thus the construction of the Siloam tunnel, and of the great dam, examined by Dr. Bliss, would be due to Hezekiah. Possibly the rock-hewn steps may have been connected with 'the way of the gate between the two walls which is by the King's Garden' (2 Kings xxv, 4; Jer. lii, 7).

"Two very important discoveries have been made during the last season, but unfortunately not by the officers of the Fund. One the shaft-tomb near Jerusalem, which shows that that style of tomb was used

much further south than was previously supposed. It also supports M. Ganneau's views that the Tombs of the Kings was of the shaft type. The other the geographical mosaic at Mâdeba, of which the value can scarcely be exaggerated.

"Mr. Dickie's exploration of the ground in the vicinity of the Great Mosque at Damascus has been most successful. It shows that the Temple with its enclosures must have been one of the largest and most magnificent buildings of ancient times, and that the church which succeeded it must also have been of great size."

The Executive Committee desire to convey their best thanks to Dr. Bliss and to Mr. Dickie for the important services which they have rendered to the Fund during the year, and also to place on record their appreciation of the tact and courtesy displayed by Shavket Effendi, the son and successor of the late Ibrahim Effendi, as Turkish Commissioner.

The Committee regret that on the expiration of the Firman Mr. Dickie's connection with the work of the Fund ceased. His original agreement was for six months, but he very kindly continued his services as long as the excavations at Jerusalem were being carried on, and has rendered invaluable aid by his beautiful plans and drawings, as well as in assisting Dr. Bliss in superintending the work.

In the early part of the year, when excavations at Jerusalem were not practicable on account of the rains, Mr. Dickie, at the request of the Committee, made a journey to Damascus for the purpose of examining certain points which it was desirable to clear up in connection with the Great Mosque of the Omeiyades there, and the results of his observations on the subject will be published in the next *Quarterly Statement.*

A very remarkable *rock-cut shaft* tomb having been discovered in the property north of the city belonging to Bishop Blyth, the Bishop kindly invited Mr. Dickie to visit and sketch it, which he did, and his description and drawings were published in the *Quarterly Statement* for October last.

Dr. Schick has continued his careful and accurate examinations of ancient buildings in and around Jerusalem, and has forwarded descriptions and drawings of the "Church of the Ascension" on the Mount of Olives; of "Khan ez Zeit," which is in the centre of Jerusalem; of the "Kubbet Shekfee Sakhra," on the platform in the Haram area; of the "West Wall of the Pool of Hezekiah"; of the "Tombs of the Kings," &c., besides contributing interesting papers on other subjects.

Mr. P. J. Baldensperger's "Answers to Questions," on the morals of the Fellahîn, published in April last, belong to a class of subjects which can be satisfactorily investigated only by those who, residing in the country, are familiar with the language of the peasantry, and in constant and confidential communication with them. The Fund is therefore much indebted to Mr. Baldensperger for his contribution.

Mr. Gray Hill having succeeded in making a journey to Petra in 1896, kindly placed an account of it at the disposal of the Fund, and it has been printed, with illustrations, in the *Quarterly Statement*.

Among reports of original observations from other explorers which have appeared in the *Quarterly Statement* may be mentioned a description, with drawing, of a remarkable sculpture at Mejdel, by the Rev. J. E. Hanauer; a Greek Inscription from near Nazareth, by the Rev. H. Porter, of the Syrian Protestant College, Beirût; and Notes from Jedûr, by Dr. G. Schumacher.

The *Quarterly Statement* has also been indebted to scholars and explorers for several other important papers.

Dr. H. J. Bailey contributed an article on the quality of the water in "Jacob's Well," which has excited much interest, and the subject has been further discussed by the Rev. H. Clay Trumbull, of Philadelphia, U.S.A., Dr. E. W. G. Masterman, of Damascus, and others. Dr. Murray has given his kind and careful attention to Greek inscriptions sent home.

Professor Flinders Petrie has written on "The Date of the Exodus"; Mr. Ebenezer Davis on "Serapis"; Lieut.-Colonel Porcelli, R.E., on "Bible Coins"; Professor T. F. Wright on "The Valley Gate and the Dung Gate"; Lieut.-Colonel Conder, R.E., "Remarks on Masonry," "The Date of the Siloam Text," "The Mediæval Topography of Palestine," &c.; and Colonel C. M. Watson, R.E., has supplied a noteworthy paper on "The Length of the Jewish Cubit," with original measurements. Dr. Chaplin has contributed a translation of that part of the "Diary of David the Reubenite" which describes his visit to Hebron and Jerusalem, and the Rev. Canon Dalton a "Note on the Hebron Haram." The Rev. W. F. Birch also has sent an interesting communication, on "Tophet and the King's Gardens," which was printed in the January number. Mr. Dickie has contributed an article on "Stone Dressing in Jerusalem."

Mr. James Glaisher, our honoured chairman, has continued his laborious task of preparing for publication the results of the meteorological observations taken for the Fund at Jerusalem and Tiberias, and his papers on this subject are of great and permanent value as recording the meteorology of the Holy Land during the period which they cover.

By kind permission of M. Clermont-Ganneau a translation of an important paper by him on the Mâdeba mosaic, which recently appeared in his "Recueil d'Archéologie Orientale" was published in the last *Quarterly Statement*.

The new publications of the Fund during the year have been "The Latin Kingdom of Jerusalem," by Lieut.-Colonel Conder, R.E., and a translation of Behâ ed Din's "Life of Saladin."

New and revised editions of "Tent Work in Palestine" and "Syrian Stone Lore" have also been published.

The first edition of "A Mound of Many Cities" having been sold out, a new and revised edition is now in the press.

M. Clermont-Ganneau is closely engaged on vol. i of his "Archæological Researches in Palestine." He has promised that the whole manuscript will be completed and ready to go to press in the course of a few months. A part of it is now in type.

In the last Annual Report it was stated that arrangements had been made by the Committee for taking over the publications of the Palestine Pilgrims' Text Society and completing the programme as originally laid down.

The concluding volume ("Life of Saladin") has been translated and is now ready to be sent out.

Since the last Annual Meeting 270 names have been added to the list of annual subscribers, and 125 have been lost through death and other causes.

Your Committee have to record with great regret the death of His Grace the Archbishop of Canterbury, Dr. E. W. Benson, who was elected President of the Society in 1891, and took a very deep interest in the progress of the work of the Fund. They are happy to announce that the present Archbishop of Canterbury, Dr. F. Temple, has consented to become the President. Dr. Temple was one of the members of the first Committee elected in 1865.

Your Committee have the honour to propose that the following gentlemen be elected members of the General Committee :—

Lord Iveagh.
Herbert Bentwich, Esq.
Claude G. Montefiore, Esq.
Charles Samuel, Esq.
William R. Harper, LL.D., Ph.D.
Professor V. Hilprecht, LL.D., Ph.D.
Clarence M. Hyde, Esq., New York.
Very Rev. Edward A. Hoffman, D.D., LL.D.
Right Rev. John H. Vincent, D.D., LL.D.
Rev. William Hayes Ward, D.D., LL.D.

The following is the Treasurer's Statement of Receipts and Expenditure for 1896, which was published in the *Quarterly Statement* for April last :—

TREASURER'S STATEMENT.

The total income for the year 1896 was £3,298 0*s.* 4*d.* Of this amount, £2,279 16*s.* 10*d.* was from Donations and Subscriptions; £5 11*s.* 3*d.* from Proceeds of Lectures; £763 17*s.* from sales of books; and £248 15*s.* 3*d.* from sales of maps, photographs, casts, and slides.

The amount spent on Exploration was £1,333 18*s.* 6*d.*

On printing the *Quarterly Statement*, new editions of books, the Archæological Researches, and binding, £566 6*s.*

On new editions of maps, lithographs, illustrations, photographs, slides, and casts, £289 3*s.* 10*d.*

The advertising, insurance, and stationery cost £85 8*s.* 11*d.*

The postage of the *Quarterly Statement*, books, maps, parcels, circulars letters, &c., cost £150 13*s.* 9*d.*

The management, including rent of office, amounted to £633 6*s.* 2*d.*

The liabilities were reduced by £200.

From America the following amounts were received through the Honorary General Secretary, Professor Theodore F. Wright :—From Subscriptions, £243 13*s.* 1*d.*; from publications, £71 0*s.* 5*d.*

The *Quarterly Statement* is sent post free to all subscribers of 10*s.* 6*d.* and upwards, and all subscribers are entitled to purchase the publications at the reduced prices, as stated in the list.

In taking over the works of the "Palestine Pilgrims' Text Society," as arranged for according to the circular letter published in the *Quarterly Statement*, January, 1896 ("Notes and News"), £108 5*s.* has been received for new sets and odd numbers to complete sets. Against this, £181 6*s.* 7*d.* has been expended for translating, printing, and binding. The sets in stock will cover this, and any additional expenditure that may be necessary under this head.

Assets.	£	*s.*	*d.*
Balance in Bank, December 31st, 1896.. ..	360	3	10
Stock of Publications in hand, Surveying Instruments, Show Cases, Furniture, &c.			
In addition there is the valuable library and the unique collection of antiques, models, &c.			

Liabilities.	£	*s.*	*d.*
Printing, Lithography, Current Expenses, &c.	787	18	6

Walter Morrison, *Treasurer.*

The Chairman.—At preceding Annual Meetings I have had to speak for Dr. Bliss in his absence. It is, therefore, a great pleasure to have Dr. Bliss with us to-day, and I would ask him, as a favour, to give us some account of the work which has been done during the past year.

Dr. Bliss.—The last time I had the honour of addressing an Annual Meeting was four years ago. We had then finished our work at Tell el Hesy, and I was able to say a few words with regard to what had been accomplished there. We then had already applied for permission to excavate at Jerusalem, but that permission had not arrived, and was not available until almost a year afterwards—in May, 1894. Since then, for a period of three years, with scarcely any interruption, except what was

caused by winter rains, the excavations have been conducted in the vicinity of modern Jerusalem, but within Ancient Jerusalem, as a glance at this map will show. Our work, as you all know, has been confined to the south of the modern city, with very little exception. What we have done has been so fully described in the *Quarterly Statement* that everything I say to-day must necessarily be a repetition, but I should like to call attention to a few salient points. In a short paper which I forwarded to be read at the last Annual Meeting, it was stated that beginning here (indicating on the map), at a point outside the Protestant Cemetery, we traced the wall, with more or less interruption, but always the same wall, right down to a point south-west of the Pool of Siloam, and then in a north-easterly direction to a point nearly in the centre of the Tyropœon Valley, including within the city of that period the Pool of Siloam. Now what was most interesting about this wall was, that at this point here almost immediately south of the Zion Gate, we found distinct signs of two periods. Resting upon the rock, and running for a distance of a hundred yards, was an old thick wall, buried by several feet of *débris*, and resting upon this *débris*, and running in the same general line, was another wall, of course less ancient than the first wall. Beyond this point, for a distance of some 50 or 60 feet, it was ruined entirely, and when we picked it up again just west of the Jewish Cemetery, it was interesting to compare the masonry of that bit with the two other walls, one above the other, and to notice which one it resembled; because this same wall, here entering the Jewish Cemetery, we found emerging from the Jewish Cemetery on the other side, with the same style of masonry, thickness, and direction—excavation in the cemetery being impossible. This identification was very important, for it was this wall that ran down to Siloam, including the Pool within the city. As I have said, the question was: Which did it resemble, the lower wall or the upper wall? Well, comparison of the drawings of Mr. Dickie, of the various bits of wall, and also the testimony of learned archæologists, such as the Dominican Fathers in Jerusalem and others who honoured the excavations with their visits, led to the conclusion that it was the lower or more ancient wall that included the Pool. This is exceedingly important in the question of Jerusalem topography, because I have not read of a single archæologist who has doubted that this lower wall of ours was truly the ancient Jewish wall of Jerusalem, and because this *débris*, separating it from the higher wall, points to a period when there was a desolation. Such a period of desolation succeeded the destruction by Titus, the lower wall being before Titus and the upper wall after. Well, such was the state of things when the last meeting was held. During the year further light has been thrown on this question. The investigation of the wall crossing the Tyropœon has been completed. It has taken one turn here and another turn there, where it points to the wall found by Sir Charles Warren, running south-west from the Temple. We have also examined the scarp, noticed by Dr. Guthe in 1880, upon which the wall connecting the two undoubtedly once ran. There are

two passages in Josephus that have led archæologists to believe that the wall described by him did not include the Pool of Siloam. One passage was that in a speech of Josephus himself, where he speaks of "the Fountain of Siloam and the other fountains that are outside the city" being in the hands of the Romans. The other passage is where he says that in its eastern course it makes a bend "above Siloam," which is supposed to have been a curve excluding the Pool. Most careful search has been made for such a wall. The search has been double. The rock has been examined from the Pool as far as this point here, some 400 to 500 feet north of the Pool. Shafts have been sunk and these connected by tunnels, and every inch of the way has been examined and no sign of such a wall has been found. It is very difficult to prove a negative, but all we can say is that in the path of the tunnel driven such a wall does not exist at the present time. A second search was made for this wall by following the street which ran down the Tyropœon Valley, because it is not certain that this wall should have rested on rock. Therefore, we ran a tunnel along the street to see whether the street passed through the wall by a gate north of the Pool. No such wall or gate was found. In other words, it is proved with almost certainty that this paved street had its terminus in a gate in the wall that includes the Pool within the city. The key of the situation then is the street. This street is very plainly older than the Byzantine Church, because the church is built over a branch from that street to the Pool. Sir Charles Wilson, in the remarks that have just been read, says that the street is undoubtedly Roman, the Herodian street not having been found. I see no reason to suppose that this street may not be as old as the time of Herod, especially as it has never been supposed that in the time of Hadrian the city extended so far south as this. One does not wish to dogmatise upon this question, but it seems to me that these passages from Josephus may be satisfied by the discoveries that we have made. Had you been in Jerusalem with me, had you seen the corner of the wall here, had you seen the rapid way in which it mounted the hill of Ophel, and turned up towards the north, had you stood on the top of that scarp, on which the wall ran, and runs to-day, and looked down to the Pool of Siloam below you, you could indeed have said you were "above Siloam." It is a bend of the wall, and it is a bend above Siloam, and it seems to me that in that discovery we have a justification of the expression of Josephus. In regard to the other question, as to whether the Pool was outside the city at the time of Josephus, note that he says "The Fountain of Siloam." It is quite possible that the term "Siloam" might have been applied equally to the Virgin's Fountain as the source of the waters which fed the Pool of Siloam. That spring was, according to any theory or discovery, outside the city at the time of Josephus, and at every time. You know that Dr. Petrie places great value on the testimony of pottery, and the pottery found at the base of this wall, and within a few yards of the Gate, presents types of the later Jewish times, but still pre-Herodian—types which at Tell el Hesy both he and myself had identified as belonging to that period. So that so far

as that argument goes, it also fits in with the belief that really here we had discovered the pre-Herodian wall, including the Pool of Siloam. One word as to the street. The drain was traced very much further than the street, because the latter was in a ruined condition, although that the street once existed above the drain I think there is no doubt. This drain, when last seen, was pointing almost directly towards Robinson's Arch, under which Sir Charles Warren discovered a massive pavement, whose large, polished stones correspond to the huge paving stones, 10 feet by 6, which we have discovered along our street. We appear thus to have a line of road from Robinson's Arch to our gate which I think can be identified with the Fountain Gate of Scripture. One looks for one thing and finds another. (Hear, hear.) It was while looking for the breadth of this magnificent flight of steps, which we discovered whilst looking for the wall which crosses the Tyropœon Valley, that we came across the interesting Byzantine church which has been so fully described by Mr. Dickie, and to which Sir Charles has referred in his note. While carrying out the investigation of this church —which was somewhat criticised as a point a little out of our province— we came across the genuine Pool of Siloam, and were able to establish its limits more fully than Dr. Guthe had done. Moreover, the discovery of the church, and the dating of it in Byzantine times, gives us an approximate date for this street. In other words, very little time can be lost by digging in Jerusalem if you are able to dig with a certain amount of experience and to compare one point with another. Now, gentlemen, you will notice that most of our work this year has been done in the Tyropœon Valley. I do not like to fill my letters or my reports with an account of the difficulties encountered, but I think I may say it is a pleasure to feel that wherever I may excavate in the future, it will be utterly impossible ever to find a place so unhealthy or foul or dreadful as that cesspool below the Pool of Siloam, and this open drain which comes down towards it. I know one physician in Jerusalem— I think he is here present—who will not visit the excavations without taking ten grains of quinine before and afterwards, and it is in such an atmosphere that we have passed all our days during the past season. The health of the party, considering all these circumstances, has been very good, but the depression of spirits that came over each who descended into that foul place was a thing that had to be fought against, and I must say that we were glad when the work there had terminated. Moreover, this same drainage, so deadly to us, was the cause of life in the vegetable world, and, therefore, our work in the Tyropœon Valley was considerably hampered by the patches of cauliflower, lettuce, and so on, which throve upon the drainage. I think I can give you no idea of the complications which arose with the landowners and the crop-owners. It means a great amount of worry and trouble, such as I was able to realise this year, when our foreman, Yusef, was detained with typhoid fever, and when Mr. Dickie and myself had to come face to face with the fellahîn, and really understood what it was to conduct these operations.

However, all these things are now passed, and when one thinks that real light has been thrown by these excavations on the question of ancient Jerusalem all these little annoyances fade from the memory. (Hear, hear.) And now I should like to say one word more. What we have found may have attached to it more or less of uncertainty, in regard to date, but what we have found need never be looked for again, thanks to the careful measurement of Mr. Dickie, and thanks to his careful plotting and drawing. The value of what we have found may not be proved to-day, but in the archæological puzzle every piece is of value. It may not fit into its place exactly to-day, but perhaps to-morrow the Germans, or perhaps the day after the Americans, or the Russians may find something which will be the key to our discoveries, as ours may be the key to theirs. (Applause.) I should like to say one word with regard to the unity of the whole work. I feel greatly interested in feeling that so many kind people in Jerusalem have taken an active interest in our labour, and have worked shoulder to shoulder with us. I do not need to speak now of our honorary secretaries, Mr. Dowling and Dr. Wheeler, but of Dr. Schick and Mr. Hanauer; of the Dominican Fathers; and with especial gratitude of Père Germer, who allowed us to encamp in the property of his Order month after month, and who also gave us *carte blanche* to excavate. I would also speak with gratitude of the Greek Patriarch, who gave us facilities, and of many kind friends who have helped to prove that scientific research is one—no matter whether it is forwarded by Englishmen or Americans, by Protestants or Catholics, by Mohammedans or Greeks. (Hear, hear.) And in closing I would like to thank the Committee for all the support they have given me. I have been told by people outside that funds were lacking, and I have seen the appeals in the *Quarterly Statement*, but the Committee have never said anything to me except "Go ahead, at full speed." I have been worried in many ways, but they have never added to my troubles by suggesting difficulties of finance, and for this I beg them to accept our hearty thanks. (Loud applause.)

The Chairman.—Would Mr. Dickie care to add anything to what has been said? We are so indebted to you, and so glad to see you, that we should like to hear you speak.

Mr. Dickie.—Thank you, very much, but I think after the full statement by Dr. Bliss I have really nothing to say.

Colonel Goldsmid.—I have been asked to move the adoption of the Report, and I do so with very great pleasure. Though I am a very old member of this Society, and have always watched it with the greatest interest, I, being a soldier, have had the ill-luck never before to have been here at the time of an Annual Meeting. I am very glad to see that some of my race and religion have joined the Council. I have before thought and said that my co-religionists have not backed up this Society as they ought to have done, but I hope now that you have some Jews upon the Council they will better support this great work—for it is a great work, irrespective of creed. It is a work in which all of us,

whether Jews or Christians, should take the greatest interest, for it is in a land which holds the dearest and highest associations of our faiths. It is many years since I was in Palestine—it was at the time of the great exodus of Jews from Russia in 1883, and I was very anxious about the colonising movement there. After visiting the settlements there and paying a visit to my dear friend Laurence Oliphant, with whom I stayed at Mount Carmel, I went to Paris and saw Baron Rothschild, my efforts being directed to breaking down the evil system by which the Jews who went there lived on the charity of other Jews; for although it may be laudable to spend one's life in prayer, yet the old ideal that work was of equal importance to prayer had been lost sight of. Where there were three little needy colonies in those days there are now over a hundred, some of which are nearly self-supporting, and the output of wine in the Jewish colonies is something enormous at the present time. But I must say that I consider the Jews owe a great debt of gratitude to the Palestine Exploration Fund for the discoveries it has made. I don't think that we in England know more about the historical sites of our own country than is now known about Palestine. I don't know that we can tell for certain the exact site of the Battle of Wakefield; but there are many points about the Maccabean Campaign that are familiar to us, and we know where Judas moved his troops. One work that this Society has done has been to throw away the rubbish and to get at the truth, and that is what we all want. I don't think any of us, whether Jews or Christians, wish to venerate a place because it has been put down for so many years as a sacred site. What we want to know is: Is it a sacred site? I have great pleasure in moving the adoption of the Report.

The Chairman.—We are favoured to-day by the presence of Professor Wright, of America. We are indebted to him for his indefatigable energy in making known in America what we are doing, and he has given us the practical means for doing this by the handsome subscriptions that he has sent. I thank him very much, and in asking him to second the Report I take the opportunity to say how much the Committee thank him and the Americans generally.

The Rev. Prof. Theodore F. Wright.—Mr. Chairman and gentlemen, I have great pleasure in being here to-day, and in seeing the faces of some of those whom I have learned to honour and love in this sacred work. I fully reciprocate, Sir, the feeling you have expressed when you say that you did not feel far from home when you were in America. Your literary men have established such shrines for us throughout England that we feel when we come here that we are indeed coming to the old home, and there is no family in America descended from the early settlers, who cannot go to some place in England, and say: "Here lived my ancestors." Well, Sir, if I have been of any use in your efforts, I feel like giving thanks to Him from whom all our blessings flow. We all may have antiquarian interests, but this work goes beyond and above them. You remember the saying of the Spartan when he heard the beautiful song of the bird.

He said : "I will catch that bird, and I will eat it, and then I shall have its voice." And when he had plucked it, and it lay in his hand, he said : "There is nothing to eat—it was a voice, and nothing more." Now, Sir, Palestine is a little country, and politically it is unimportant. It does not abound in mineral wealth, nor has it great resources of any kind, but it is a voice—the voice of ages, the voice of God. Sir, it seems to have been given to you in England to lead in this great and glorious work, and I have great pleasure in saying, on behalf of many whom I know in America, that they have full confidence in your leadership, that we gladly accept your decisions, and that gradually we are increasing the circle of your influence, with the result that I believe I have been able to transmit more lately than ever before. (Hear, hear.) And this, Sir, I believe will go on. If only you discharge as nobly as you have hitherto done the duty that falls to you, we will gladly co-operate. Lead on, brethren ; the Americans will follow. (Loud applause.)

The report was then unanimously adopted.

Colonel Farquharson, R.E.—I beg to move that the present Executive Committee be re-elected for the ensuing year.

The Rev. Dr. Rogers.—I have very much pleasure in seconding that resolution. I must say, having attended many meetings in this room, that this is the supremest moment I have passed under this roof. I have never been at a meeting where so much has been contributed, and where we have had the pleasure of seeing men who have been face to face with the work, and who have returned after having achieved the purpose for which they were sent. I think if the speeches that have been delivered to-day are reported, they will have a distinct effect upon as many of the public as our publications reach. I entirely hold with the sentiment that has been expressed by two or three of the preceding speakers that truth is the one aim that we have, and that science and the research for truth combine all nationalities. Such expressions as that are calculated to give force and enthusiasm to the work, and I hope that the Palestine Exploration Fund, which has now gone on since the sixties, will, as it goes on into the century to come, be marked with increased success. It is most interesting to find that the earth is giving forth practical proofs that the old Word is true : "Speak to the Earth, and it will tell thee." We have to rejoice over that wonderful discovery in Egypt, and I think that in the soil of Palestine is yet to be found ample reward for those engaged in this sacred work. (Applause.)

The Executive Committee were unanimously re-elected.

The Chairman.—Our Firman for the exploration of Jerusalem expired on the 20th of June. We have been digging there three years, under difficulties that Dr. Bliss has only just touched upon. Well, we have had Dr. Bliss here to-day, and a most interesting account he has given us. I should like to move that our warmest thanks be given to him. He has said that he has had assistance in every way. As I have told him, much

has lain to his own credit. I have always heard his tact, his judgment, his urbanity and decision commended, and the result has been the success of his work. I can scarcely find words to express my admiration of the manner in which he has done it. And in thanking Dr. Bliss, we must thank Mr. Dickie also, for the difficulties that one has gone through, the other has also. I should also like to mention Dr. Schick. He is getting on in years—between 70 and 80—but his papers are still admirably clear and definite. And in moving a vote of thanks to Dr. Bliss and Mr. Dickie, I should like to include Dr. Schick, and all other kind friends in Jerusalem who have helped them. And now to come nearer home, Mr. Armstrong is ever at work, and most earnestly at work, upon a salary that I should like to see increased, for he deserves it. There are also our local honorary secretaries. Out of the £3,298 reported by the treasurer, our local secretaries collected £762, and this is all done for the love of the work, and without the slightest remuneration, and I think our best thanks are also due to them. Then there is Mr. Morrison, our treasurer. His is no light work, for I know that he looks after every penny. Well, gentlemen, we cannot but give our best thanks to everyone who has helped us in our work.

Colonel Watson, R.E.—I am very pleased to second this comprehensive vote of thanks. There is one point I should like to say a few words about. I am an engineer by profession, and know something about tunnelling, and to me the most marvellous thing about the whole affair is the way in which Dr. Bliss has done his tunnelling. How he has accomplished it without injury to a single man I cannot make out, and the best of it is that it is all done so quietly that no one realises what he has been doing. If he had filled his letters with complaints, we should have heard all about it, but he goes about his work so quietly, whether dealing with the Turks or going underground, that there is a danger that some of us may not fully appreciate his difficulties or understand his triumphs. I think that no one could have carried out the work, wholly apart from its antiquarian side, better than Dr. Bliss and Mr. Dickie have done. (Applause.)

The vote of thanks was heartily carried.

Canon Dalton.—Before we separate, we shall all feel it our duty, and no less our pleasure, to pass a cordial vote of thanks to Mr. Glaisher for having presided over us to-day.

Mr. Wm. Simpson. I have the greatest pleasure in seconding that.

The vote of thanks was passed with acclamation.

The Chairman.—Gentlemen, I thank you very much. I confess to a little disappointment about Jerusalem. I wanted to know more about its revelations than it is likely I, at my age, shall ever know. I thank you very much for the vote you have given me, but I have always been assisted by earnest men, both here and upon the Committee. You have only to look at the attendance book to see how regular are the attendances

there. I feel that the time will soon come when I shall no longer be able to attend the Committee, for I have always thought that the chairman should attend every meeting; if he misses one the link is broken. I thank you very much for the vote you have given me to-day.

The proceedings then terminated.

FOURTEENTH REPORT ON THE EXCAVATIONS AT JERUSALEM.

By F. J. Bliss, Ph.D.

The last Report was dated June 8th, only 12 days before the permit expired and the excavations were closed. Hence the present Report must be necessarily brief. The chief interest during this short period centred in the search for the drain and street in the Tyropœon. I was anxious to trace these as far north as possible. Owing to the depth of the shafts necessary to reach the drain from point to point; to the occasional change in direction and in the rise of its base, which prevented our coming down immediately upon it in the trial shafts along the supposed line north; and, finally, to the fact that the drain was, as a rule, silted up almost to the soffit of the covers, the progress was slow, and we advanced only a distance of 250 feet, leaving a distance of about 400 feet to the City Wall, and of about 700 feet to the south-west angle of the Haram area. As a rule, this part of the drain has about the same dimensions as described before, but at one point a contraction occurs in both width and height. This is due to a reparation, effected by building a second lower wall against the original west wall of the drain, and by using smaller covers. Work along this section was very tedious, as the later wall had to be quarried away to allow of any progress. After 30 feet of this contraction the drain reverts to its original dimensions: height, 8 feet to 10 feet; width, 2 feet 6 inches to 2 feet 8 inches. The bottom is sometimes rock, sometimes a making up of cement.

At every point possible search was made for signs of the street above the drain, or, in the absence of this, for the making up below its pavement; but these were absent, even where the covers of the drain were *in situ*. Only at one point was observed a bit of a kerbstone (similar to the kerb of the street) with a wall of a house back of it; but the absence of the making up below it makes it doubtful whether it belonged to the desired street. During last season, at points where the pavement was ruined, we found this making up still existing above the covers. However, the fact that for 450 feet of its length we have proved the drain to run under the street suggests strongly that they were always in connection. It is quite possible that the drain may have been in use

after all signs of the street and its making up had disappeared from certain parts of the line.

Though our street was lost some 1,150 feet from the south-west angle of the Haram area and the drain was traced only to a point some 700 feet south of this corner, yet the discoveries of Sir Charles Warren at this same angle give a hint as to the further course of both. From a point 160 feet north-west of Barclay's Gate he traced a channel along the west side of the Haram area to a point some 130 feet south of the south-west angle, a distance of about 550 feet. For the first 160 feet it is only a narrow passage 18 inches wide, having a flat roof of flagging. It then broadens to a width of 3 feet, and turning to the south runs for 123 feet, with masonry walls, roofed over by a semicircular arch, the height being 8 feet. It then enters the rock, which continues to the south-west angle, the height varying from 8 feet to 12 feet, the breadth from 3 feet 9 inches to 4 feet. The roof is of arched masonry. In its course it passes through two circular cisterns. "After passing around the south-west angle, the aqueduct changes its direction more easterly, and, emerging from the rock, is carried on in masonry 3 feet wide, with an arch of five voussoirs. . . . . After about 40 feet it turns to south and is continued in a drain 2 feet wide, roofed over with flat stones for a further distance of 59 feet, when it becomes silted up and very narrow."[1]

At this place it is pointing in general towards our drain, which is some 570 feet to the south. Although the central part of this channel is arched over yet both at the north and the south it is covered with flagging like our drain. The higher part of this channel is called an aqueduct, but for the last 59 feet to the south it is distinctly called a drain. Comparing the level of the base of this channel at the south-west angle with the level of the base of our drain at the point last seen we find a drop of about 1 in 14. The average fall in our drain is about 1 in 16. The fall in the northern channel is 1 in 20. It should be noticed that the northern drain where last seen has a breadth of 2 feet and is said to be narrowing. Our drain has a breadth of from 2 feet 6 inches to 2 feet 8 inches. This need not necessarily militate against the identity of the two, as the construction of our drain varied at different places both in height and the class of masonry employed.

West of the Haram wall, at various points between the south-west angle and Barclay's Gate, at a height of from 10 to 23 feet above the roof of the channel, Sir Charles Warren found a fine pavement, connected here and there by manholes with the channel below. The blocks are of hard *missae*, the largest of which measures 7 feet by 4 feet, with a thickness of 18 inches. They are well polished as if by traffic.[2] The largest of the paving stones in the street above our drain measure 6 feet by 4 feet, with a thickness of 18 inches. They are also of hard *missae*, and well polished. From our street also occur manholes leading to the

[1] Jerusalem Volume of "Survey," pp. 179–183.

[2] *Ibid.*, pp. 172 and 178.

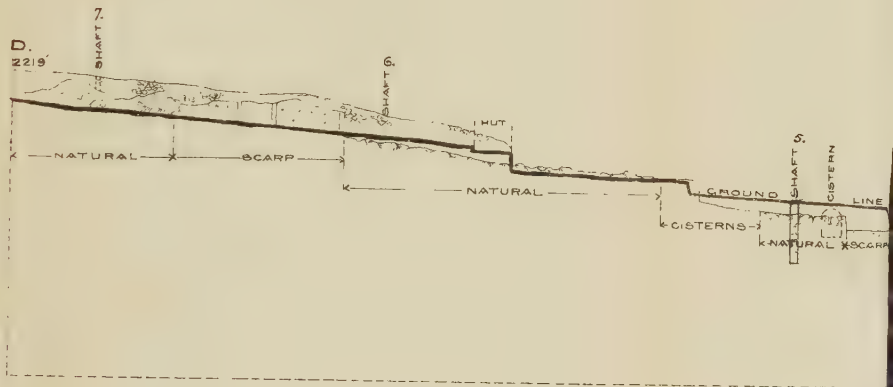
drain. Circumstances prevented our testing the connection of our work with that of Warren, but the identity of our drain and pavement with the northern channel and pavement is strongly suggested by a comparison of those two systems, almost directly pointing towards each other. We have thus at least a hint of a paved road leading from Barclay's Gate down the Tyropœon Valley, terminating at the gate which we found south-west of the Pool of Siloam.

In my last Report I spoke of the examination of the west slope of Ophel, which was not then complete. This was made from the place where the hill tapers down to a point, near the junction of the Kedron and Tyropœon Valleys, northwards to the point where it is cut by the section CD (*see* last Report), a distance of 725 feet. The object of this study was double: first, to see whether there exist any remains of an ancient wall along the top; second, to ascertain whether any rock-hewn steps descend into the Tyropœon. In order to test the first question, it was necessary to examine the top of the rock; in order to test the second, to examine the slope. Along a large part of the line the top of the rock is either exposed or lies very near the surface, hence only a few trenches or tunnels, driven back 10 feet from the top of the rock, were required to exhaust the probabilities.[1] In none of these was the looked-for wall discovered. Between B and Shaft 1 a modern cemetery prevented any work. Shaft 1 was sunk back from the face of the exposed cliff. Rock was found at 6 feet; here a scarp facing *east* suggested a cistern sunk in the rock in the path of the desired wall. In Shaft 2 the rock was found at 5 feet. At Shaft 3 the rock was found by merely scraping away the face of the terrace. Between Shafts 3 and 4 the rock is exposed. At Shaft 5 the top of the rock appeared at a depth of 6 feet. Driving back a tunnel for 10 feet we found nothing but shallow cuttings. A gallery was driven back towards Shaft 4, and at a distance of 16 feet a cistern hewn in the rock back of the cliff, and vaulted over, occupies the place where a wall should run. Thirty feet further on another cistern occurs.

Between Shafts 5 and 6 the top of the rock is exposed in places, and for the rest it was examined by tunnels where cisterns and other such obstacles did not prevent. Near the hut a scarp runs at right angles with the section for some 40 feet, but no signs of a wall having been built against it are visible. Between Shafts 6 and 7 the rock is exposed, being mainly scarped for dwellings, as shown by the partitions projecting at right angles for a few inches, where they are broken off, and by the cupboard-like niches. There are also square holes for the insertion of beams, common in all cliff-dwellings, indicating that constructions were set against the scarp. The top of the cliff is usually so near the surface that we sunk only one shaft, No. 7, which showed that a cistern had been hewn directly inside its outer face. Thus, not only was no wall found, but at least at five points its place is taken up by cisterns.

[1] *See* Plate I.

EXCAVATIONS



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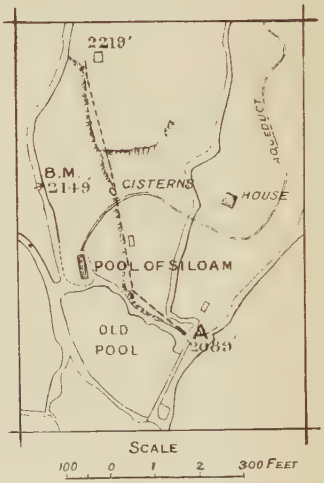

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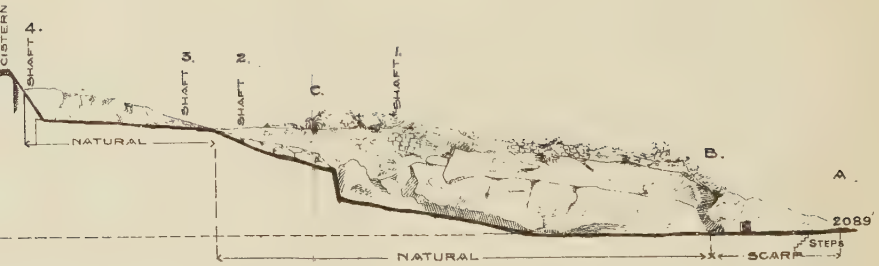


OCK ON WEST SLOPE

OF FEET.

Excavations by Fred. J. Bliss.
Measured & Drawn by Archt. C. Dickie
June 1897.

In order to determine whether rock-hewn steps led down from the hill to the valley, an examination of the slope was necessary. This was carefully made along its whole length from A to D. From A to B the rock is scarped, but from B to C the exposed cliff shows no signs of tooling. Between C and Shaft 4 the rock, in places exposed and for the rest examined by tunnels, was all seen to be unworked. That the natural cliff continues north is shown in Shafts 4 and 5, where it is respectively 25 feet and 21 feet high. At these depths it breaks out level for a few feet, but this may only indicate a ledge in the cliff. A tunnel was driven from Shaft 4 to 5. For the first 13 feet the rock is cut for a cistern, which partly projects from the cliff, beyond this for 23 feet the rock is scarped.[1] At that point it breaks out for 3 feet and then the natural face continues, back of which is the cistern described before. Beyond Shaft 5 the same natural face was traced for 14 feet, when operations were interrupted by three small cisterns, two of them containing water. From the last of these to the hut the rock crops up, but as the top had been recently blasted away, we cut a trench along it deep enough for us to see that it sloped down in a natural condition. Between the hut and the scarped cliff an examination by tunnels showed the rock to be unworked. In the scarp—plainly cut for dwellings—no signs of steps were found. To recapitulate: between A and D the greater part of the cliff is quite unworked, and where cuttings occur, these appear clearly to have been made for dwellings or cisterns. The portions of the cliff which are natural and those which are scarped are indicated on the section.

At A, however, an interesting discovery was made. At the point where the road which leads down from Ophel approaches the dam-wall of the Old Pool, Mr. Dickie called my attention to two paving stones at different levels which suggested that steps might occur at this point. Setting some men to dig there we found a flight of five steps terminating in a paved platform. The breadth of treads is uniformly 15 inches, the height of the risers is 10 inches. The steps are laid in mortar, are well polished by use, and are dressed with the chisel pick. Unfortunately this excavation was not undertaken till the day before the closing of the work, hence several points were left undecided. The trench down the steps was dug parallel to the scarp of the cliff, some 18 feet away, but I think it highly probable that they extended to the scarp. Their limit in the other direction was not ascertained, but we may safely assume that they were at least 18 feet broad. The platform may be simply a break in the stairway, which is pointing in a north-westerly direction to the flight of eight steps we found descending from the south to the court-yard in front of the original Pool of Siloam.[2] It is very annoying that time forbade our pulling up the steps to see whether rock-hewn steps

[1] As plaster occurs on the scarp we may have here another cistern.

[2] *See* general plan in January *Quarterly Statement*, 1897, and plate facing p. 14.

underlie them. They occupy the place where it is reasonable to expect the "stairs that go down from the City of David."

We read in Nehemiah iii, 15, that the section repaired by Shallun included the Fountain Gate, the wall of the Pool, and extended as far as these stairs, which would naturally be expected at a point near the wall. The steps we have just discovered occur inside the city and near the angle of the wall that we discovered turning up Ophel.

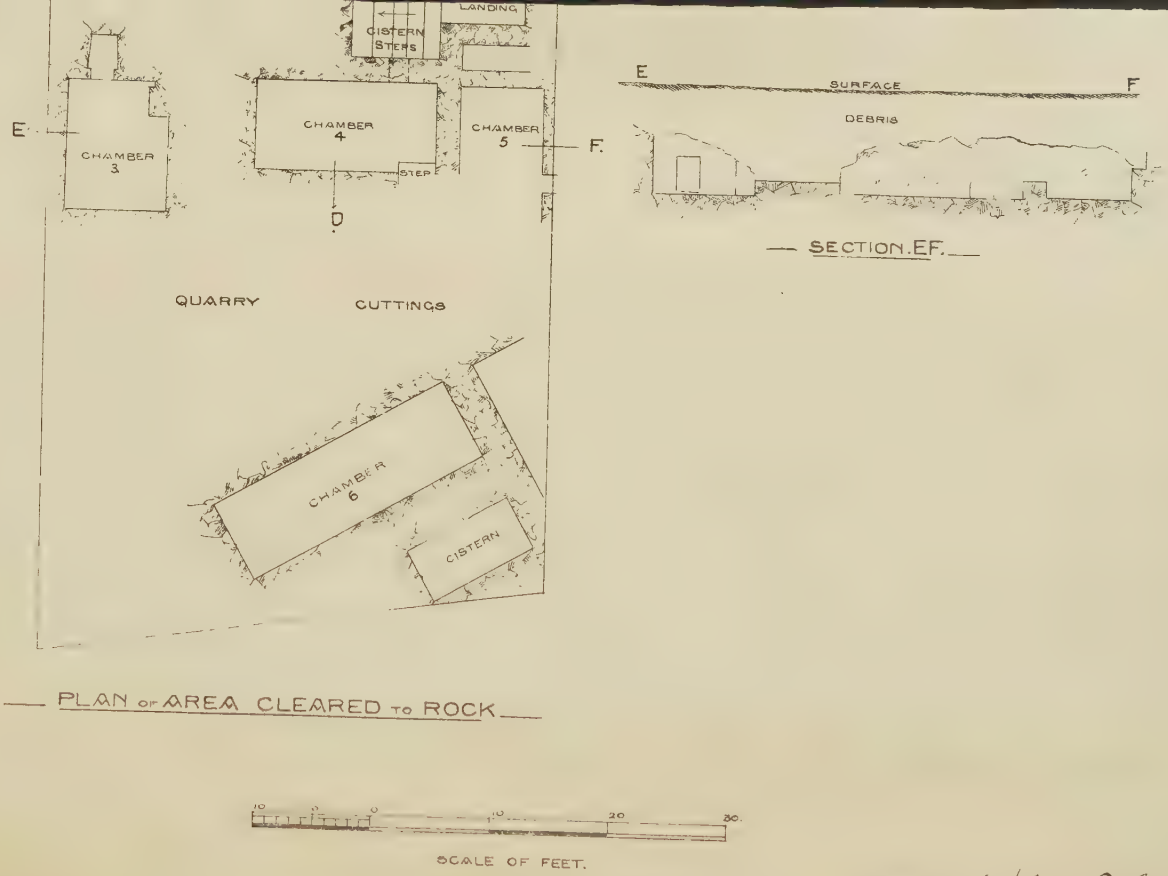
In the last *Quarterly*, p. 180, I mentioned a large clearance which we made south of the curve formed by the Siloam Tunnel before it enters the Pool of Siloam, stating that it had been suggested that the tombs of the Kings might be looked for within the curve. I should have added that the suggestion came from M. Clermont-Ganneau. His views were published in the "Revue Critique," of November 7th, 1887, pp. 336–340. I had not the article by me and I find since that he indicated the region to the *north* of the curve. When on the spot it seemed to me that the argument would equally well apply to the region to the *south* of the curve, and it was here that I made my clearance to the rock, marked on the plan in the last *Quarterly*. As I have said, no entrance to tombs was found, but I am now able to publish a plan[1] of the area excavated, the breadth of which was 44 feet (erroneously stated at 36 feet in the last report) and the average length 100 feet. The rock, seen over the whole area, has an average depth of 12 feet from the surface. Almost everywhere it bears the marks of tooling. Many of the cuttings were made simply for quarrying stones, and such are not indicated in the plan. Many rock-cut dwellings and cisterns were found, but parts of even these had been quarried away.

Chamber 1 had been seen by Dr. Guthe in a trench across this field.[2] It is approached by rock steps from the south. In the south-west corner of its floor is a round hole, 18 inches in diameter and 14 inches deep. On sounding its floor we found no indication of a cavity below. The east and west sides have been covered with plaster, and have an inward batter for 9 feet, where a ledge 8 inches in breadth occurs. Below the ledge the walls curve inwards. Along the ledge there is a single course of masonry, slightly curved, which suggest that the lower part of the chamber had been arched over. The height of the key-stone of such an arch above the floor would have been 6 feet 6 inches.

In the south-west angle of Chamber 2 is a circular hole similar to that in Chamber 1. South of Chamber 2 is a cistern, stepped down from the landing, similar to many cisterns found by us on the Western Hill. These steps are covered with two coats of plaster, the inner composed of chips and ashes, the outer of chips and earth. The broken arch shown in Section CD indicates that the cistern had been entirely hewn in the

[1] *See* Plate II.

[2] For his section of this chamber, called by him a cistern, *see* Plate I in connection with the "Zeitschrift des Deutschen Palestina-Vereins," 1882, Band V, Heft 4.



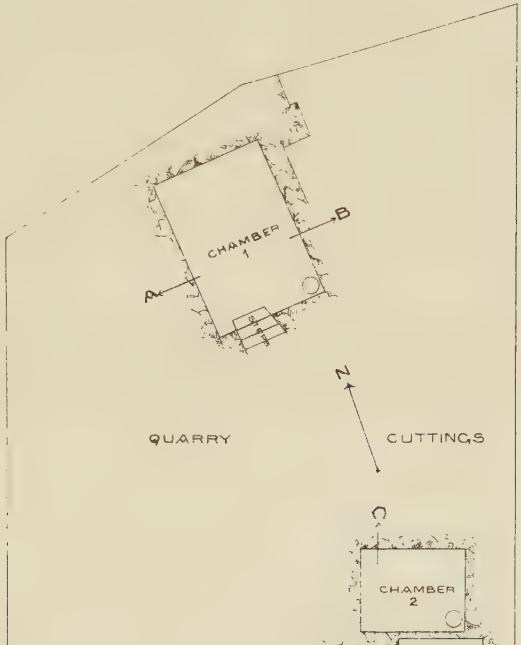
— PLAN OF AREA CLEARED TO ROCK —

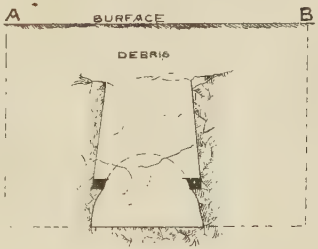
— SECTION EF —

To face page 264

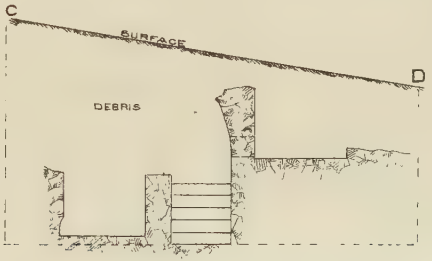
Excavated by F. J. Bliss
Measured & drawn by Rich. C. Dickie
June 1897

EXCAVATIONS ON OPHEL





SECTION A.B.



SECTION C.D.

rock. In the north walls of Chambers 3 and 4 are niches, the one in the former being 3 feet 9 inches deep. On the scarped sides of Chamber 6 and of the cistern to the south of it run rude masonry walls, probably of later construction. The floor and sides of the cistern are plastered. The descent into most of these chambers must have been by a ladder. It seems probable that they once had rock-cut roofs, since quarried away.

The types of pottery found in the *débris* above these rock cuttings were chiefly Roman, including tiles and the common ribbed ware. There were two Byzantine lamps, and some bits of Jewish jars occurred. Many coins were found. The task of cleaning them was kindly undertaken by Mr. Herbert Clarke, of Jerusalem, who was able to identify 21, the rest being so corroded that nothing could be made of them. Fifteen of these certainly are not later than the first century A.D. I append a list :—

1. Half shekel of Simon Maccabæus, year 3 (B.C. 141 or 145). Very well preserved. *See* Madden's "Jewish Coinage," p. 44, No. 6.
2–3. Coins of Herod Agrippa I (A.D. 37–44).
4. Coin of Felix, Procurator. Date of coins, fourteenth year of Claudius (A.D. 54–55).
5–6. Coins of Felix, Procurator. Date of coins, fifth year of Nero (A.D. 58–59).
7–14. Coins of First Revolt, second year (May A.D. 67 to May A.D. 68).
15. Coin of First Revolt, third year (May A.D. 68 to May A.D. 69).
16–20. Roman coins, not further identified.
21. An Arab coin.

I also began a clearance to the north of the curve, but, owing to the unexpected depth of the soil and to the expiration of the permit, this had to be abandoned before much progress was made. However, immediately to the north of the house included in the curve (*see* key plan in Plate I), in an area measuring, roughly speaking, 80 feet by 40, the rock has been quarried away in modern times. Some soil has since accumulated over the area, but the peasants informed me that nothing had been discovered there resembling a pit entrance to a tomb.

Some 250 feet south of the Aksa Mosque, and immediately east of the Hakûrat el Khâtûnîye, where the city wall turns north to join the Haram area, there are six olive trees arranged roughly in the form of a semicircle. This same rude semicircular form may be observed in the surface contours immediately behind the trees, the ground sloping towards a common centre with a radius which may be roughly taken at 100 feet. As the appearance of the ground suggests that a theatre might be buried beneath the surface, I was instructed to make an excavation at this point. Accordingly I sank three shafts to the rock, near C, E, and G (*see* Plate III), with the intention of pushing a tunnel from each one to the central point A, in order to find out the slope of the rock, and especially to see whether it was cut in the form of seats or had seats built upon it. In the first shaft (*see* Section AE), sunk some 20 feet north of E, rock was struck at a depth of 4 feet. Between this point and E it was found

to have the same slope as the surface and to be, for the most part, in a natural, unworked condition, having the virgin earth clinging to it. At E the rock descends in a perpendicular worked scarp, 17 feet 6 inches high. From the face of this scarp we continued our tunnel towards the south. For 19 feet the rock slopes gently, when another small scarp occurs pointing north-west, thus running at right angles with the lofty scarp. From the face of this second scarp the rock slopes gently towards A, falling only 3 feet in 47. Meanwhile, to save time, we had sunk another shaft at A, finding the rock at a depth of 15 feet, and had pushed north to meet the other tunnel. Resting immediately on the rock we found a concrete flooring, some 15 inches thick, extending north for 31 feet, and bounded on the south by a thin wall of masonry, forming an angle at A.

In the shaft at C rock was struck at a depth of 12 feet. Here was found the corner of a wall running north. This was found to belong to a system of chambers, to be described later, as the main purpose of the shaft was to examine the rock between C and A (*see* Section A to D). At the west of the shaft an angle of a scarp was found (*see* Plate III, plan) from 5 to 6 feet high. Sinking to the base of this, we pushed along the side that faces north for 23 feet to B, where the rock drops abruptly for 8 feet 6 inches, though here it is unworked. As the rock at the base of this drop is only 5 feet higher than the rock at A, giving a fall between the two points of only 1 in 10, and as time was very precious, we did not make the connection.

In the shaft at G we found rock at a depth of 17 feet. Our intention of pushing a tunnel straight to A (along the radius of our supposed theatre) was at first frustrated by a wall so solid that we did not attempt to break through it, but followed along its face to H. Here, however, we found this wall butting up against another of equal hardness. Accordingly, we broke through the first wall, which, notwithstanding its solidity, has no great thickness, and followed the rock, in which cisterns were hewn, to four rock-hewn steps, the lowest of which has the level of the rock at A (*see* Section A to G). This stairway is only 8 feet wide, and the treads vary in breadth, but the rises are all 13 inches. As the plan shows, the descent is towards the north-west. The slight height of the steps, as well as their direction, shows that they had not formed seats for a theatre, as in that case the incline should have been south-west, towards A.

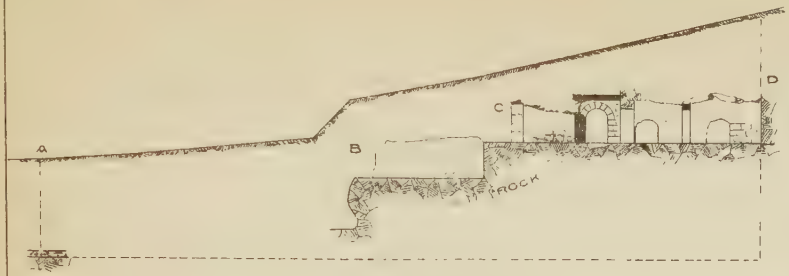
The results of our work along these three radii, AC, AE, and AG, may be summed up as follows :—(1) No signs were found of cuttings in the rock corresponding to tiers of seats in a theatre, and the virgin soil clinging to rock from E 20 feet north shows that the rock here had never thus been cut. (2) No signs were found of foundations of seats built on the rock. (3) Though the fall of the rock along the three radii would have rendered the construction of a theatre easy, yet the entire absence of any signs of such a construction makes it appear improbable that a theatre has ever existed here.

GROUND PLAN

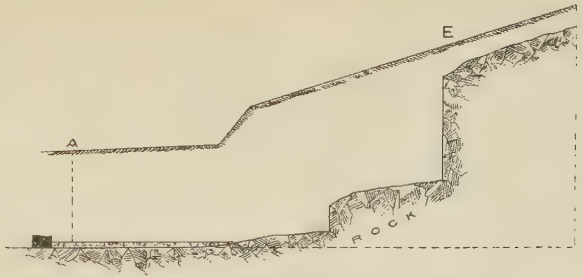
SCALE OF FEET

Excavated by F. J. Bliss.
Measured & drawn by Arch. C. Dickie

10 note page 26



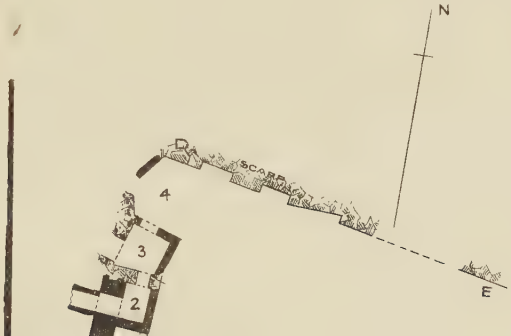
SECTION A. TO D.

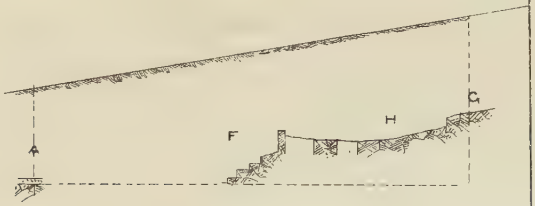


SECTION A. E.

EXCAVATIONS ON OPHEL

NEAR MOSQUE AL AKSA





SECTION A. TO G.

I may now describe the curious dwellings found by following to the north the wall struck at C. The entrance to Chamber 1 may have been at C, the offset in the wall representing the jamb of a door. The east wall was not seen, and is only dotted in on the plan ; but the chamber could not have been wide, as it is roofed with slabs about a yard broad. Nothing was found on top of the slabs. The west wall is covered with plaster. Signs of mosaic were seen in a narrow channel passing out of the supposed doorway at C. Breaking through the north wall (which is not bonded with the west wall, is not plastered, and seems to be of later construction) we found ourselves in Chamber 2, which measures only 6 feet 6 inches by 5 feet. The west side consists of a circular archway of masonry, the apex of which is 6 feet 3 inches above the floor, leading into a passage or drain, 3 feet wide, having masonry walls and covered with slabs. This passage we did not explore. The north side of Chamber 2 consists of scarped rock with an opening 2 feet 4 inches wide, having a circular head, the apex being 6 feet from the floor. In Chamber 3 the roof and the walls to west and south are all of rock, masonry walls, similar to the south and east walls of Chamber 2, forming the east and north sides. In the west side an opening with circular head (whose apex is only 4 feet from the floor) leads into a passage which we had no time to follow. Passing through an opening in its north wall we came into Chamber 4, the limits of which we did not ascertain. The west side is partly of rock, partly of masonry, with an opening similar to that in Chamber 3. The north side consists of a scarp (*see* plan), which was traced for 38 feet towards the east, beyond which point it seems to run on, being in line with the high scarp at E, though the level of its base is 9 feet higher than that of the latter. In this scarp are niches 5 feet 6 inches wide and 14 inches deep, one of them having a circular head. Beyond the second niche the scarp bends inward, but soon returns to the line by an offset. Plain white mosaic, occurring at two different levels, was observed *in situ* on the rock floor.

From the above description it will be seen that not much can be told as to the use of these chambers. We have evidently three periods. First, the rock-cut chambers which may originally have served as tombs. Second, the plastered wall at C. Third, the other masonry walls, with the mosaic floorings, the slabs covering Chamber 1, and perhaps the passage or drain leading west from Chamber 2. The third period appears to be Roman or Byzantine. Our object in examining the top of the slabs over Chamber 1 was to ascertain whether any seats were built upon them, the idea being that possibly the chambers might represent dressing rooms of the theatre. As I have said, nothing was found. The pottery in the *débris* was all late.

At the side of the road leading west from the Tomb of the Virgin, in the Valley of Jehoshaphat, at the point where it turns to the north, Dr. Flinders Petrie observed, in 1890, several irregular rock-hewn steps, pointing about west to the Bab al Asbat, at the north-east angle of the Haram area. I was instructed to ascertain whether these steps led up

the hill. At 39 feet from the steps a trench was dug across the desired line, the rock being only a foot or two beneath the surface. At 146 feet from the steps, in the same line higher up the slope, rock was found at 10 feet, and tunnels were driven to north and south. In neither case were steps found, but in the second excavation rock-cut tombs were discovered containing bones, glass vases, and Byzantine lamps, similar to types of the fifth and sixth century A.D. We did not think it worth while to clear out the tombs, so no plan could be made.

At this time the work was spread over a large area. We had men on the south end of Ophel, others in the Tyropœon, others near the Khâtûnîye, and still others west of the Virgin's Tomb. Discipline, however, was maintained, and on a whole they worked very faithfully. It was not until near the close of the last week that they began to suspect that they were to dig for us no longer. I was sorry to part with these brave men and boys, many of whom had worked for us from the very beginning.

LONDON, *August 24th*, 1897.

THE GREAT MOSQUE OF THE OMEIYADES, DAMASCUS.

Report by ARCHIBALD CAMPBELL DICKIE, A.R.I.B.A.

ON November 16th, 1896, Mr. R. Phenè Spiers, F.S.A., read a paper on these buildings at a meeting of the Royal Institute of British Architects. The mosque is now being restored from the fire of 1893, and the present was thought the most suitable time to make a further study of the remains and complete, as far as possible, the work which had been begun by Porter and Spiers. Consequently in the end of last December I was asked by the Committee of the Palestine Exploration Fund to go to Damascus for that purpose. I had already received from Mr. Spiers a copy of his paper, besides full notes on the different points which he wished cleared up.

On account of the usual winter hindrances to the work in Jerusalem, and an enforced trip to Medeba, I was unable to leave for Damascus before the middle of January. At Beyrout I was lucky enough to meet Mr. W. W. Reid from Edinburgh University, who is the "Blackie travelling scholar" of the year, and who had just arrived from Greece, where he had been studying at the excavations of the British School in Athens. We travelled together to Damascus, and I had the benefit of his valuable assistance throughout my stay there. Before our arrival the thirty days' fast of Ramadan had commenced, the one month of all the year which seemed most unfavourable to my work. I decided to start work where I was least likely to give offence to the Mohammedans,

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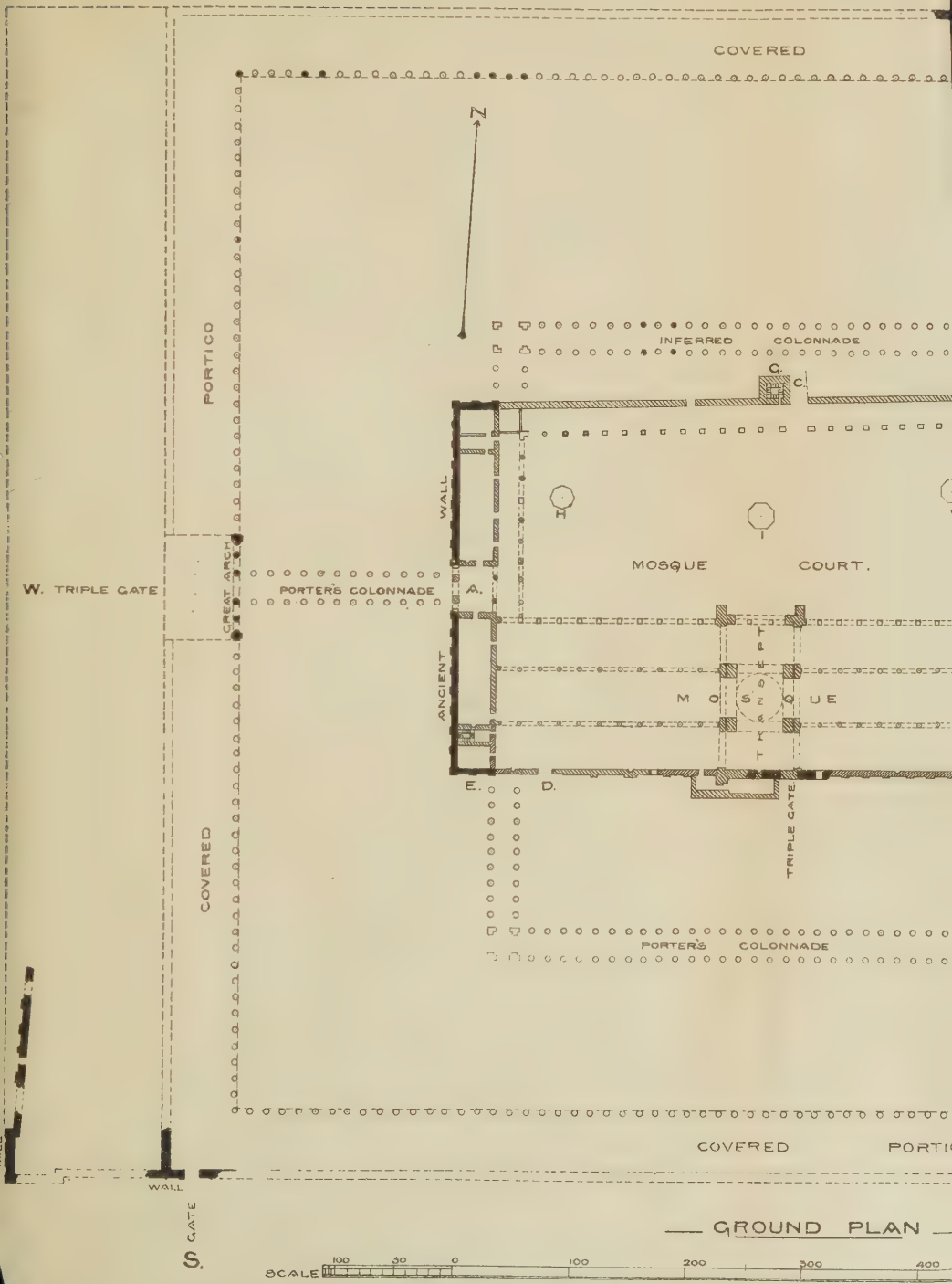
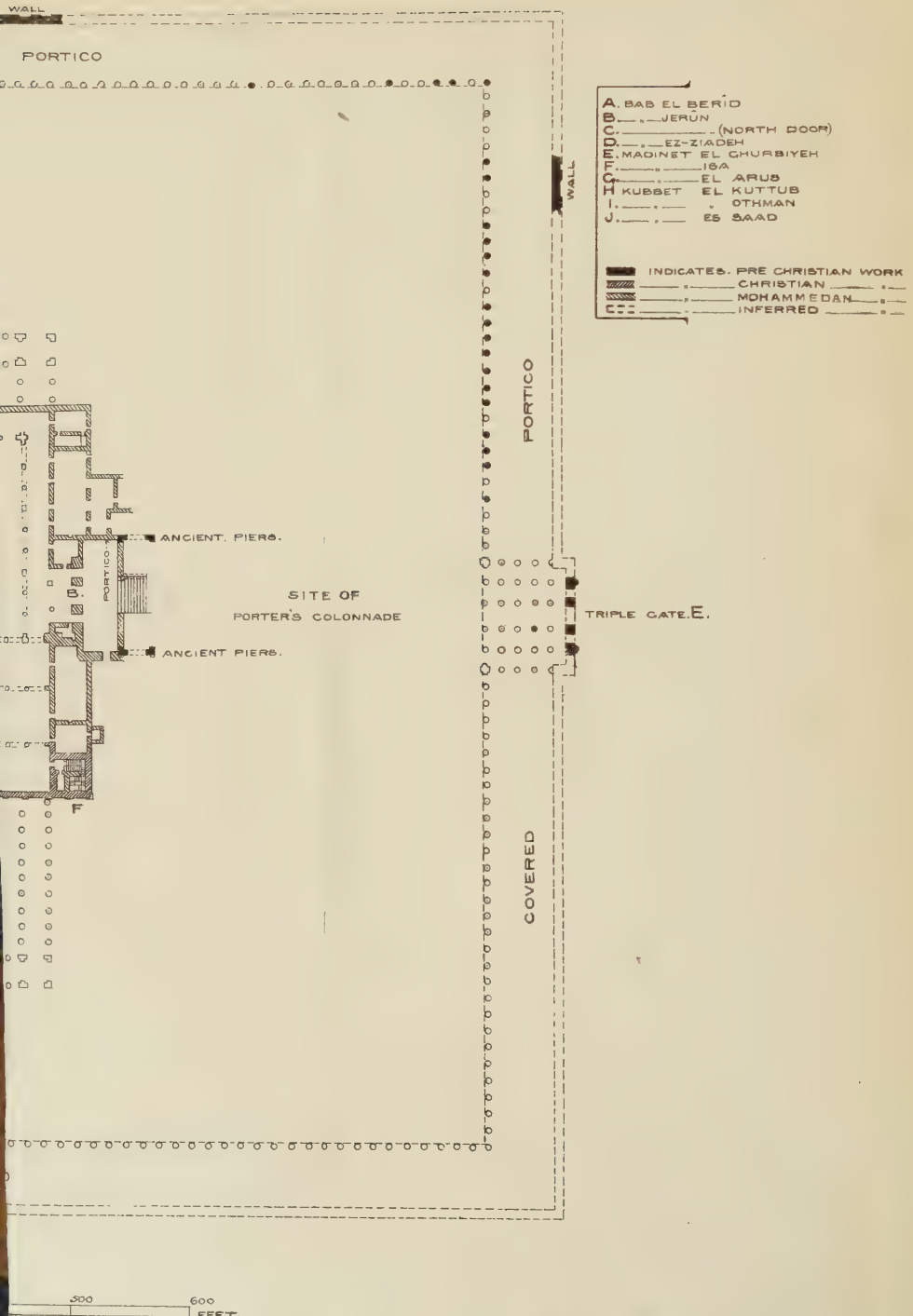
THE GREAT MOSQUE OF THE OMEIYA
AND
TEMPLE REMAINS AT DAMASC



GROUND PLAN

SCALE 100 50 0 100 200 300 400



Meas.d & drawn
by. Archd C Dickie
Feb. 97

hoping to make myself a familiar object in and about the mosque locality. Anticipating this necessity I had brought Yusif with me and by his tact we were soon established in the minds of the local inhabitants. During the time of waiting Dr. Masterman took pains to show me every known remain, and also pointed out the results of his observation with regard to Mr. Spiers's inquiries.

This report, as far as it refers to the mosque and Christian church, is in itself incomplete, as I have simply confined it to the place of auxiliary notes to Mr. Spiers's paper; but I have reported in full and made complete drawings of the Roman and pre-Roman remains, as my discoveries have thrown what I believe to be new light on the temple enclosure.

The west wall of the mosque—for its whole length—is a system of pilaster building of one style, nine pilasters on either side of the triple entrance, "Bab el Berîd" (which is evidently a later Mohammedan insertion). This same class of work returns round the north-west angle as it does on the south-west, showing three pilasters and stopping at the third pilaster as in the south. The four northernmost pilasters of the west wall and the return at the angle I saw in the interiors and on the tops of the houses built up against the wall, and the three pilasters at the north angle I saw and measured from an access through the north wall of the mosque. All this wall stands complete up to the caps of the pilasters which are all similar (*see* Plate I). The pilasters vary from 5 feet to 5 feet 6 inches broad, and project from 7 inches to 9 inches, on the

north side I measured their height from the base to the cap necking, and found it to be 34 feet 10 inches, the base is a simple square rest to the pilaster projecting 6 inches beyond its face and continuing unbroken along the inter-spaces which average 11 feet 3 inches wide. The masonry is well set and squared, and the face dressing rather roughly picked, set in lime, and coursed in heights of from 20 inches to 36 inches. I was fortunate enough to notice through a hole in the building that the last cap of the third pilaster from the north-west angle returns back through the wall. This piece of wall runs exactly at right angles to the west wall (the bearings of the north and west walls being 265 degrees and 175 degrees respectively), and the change of angle on the north wall only commences at the junction between the ancient wall and the more modern extension, which shows a straight joint in line with the face of the backsett wall, and runs at an angle of 267 degrees. This latter masonry is patchy, badly coursed, and rudely built of old reused stones, many of the same character as those in the early wall. It has not the character of the south Mohammedan wall, which is mostly of one style of masonry finely pick-dressed and well squared and set.

A study of the south wall is of exceeding interest and value. In its masonry can be read its history from the time of the earliest Syro-Greek pilastered wall (which Mr. Spiers dates contemporaneous with the palace of Hyrcanus, B.C. 176, and which is similar in detail to that on the tombs in the Valley of Jehosaphat assigned to the Hasmonæan period), through the Roman occupation on to the Christian work by Theodosius and Arcadius of the fourth and fifth centuries, the Mohammedan work of El Walid in the eighth century, and the later restorations after the fires of the eleventh and fifteenth centuries. The Syro-Greek work I have described. In the centre of the south wall—as shown on plan—is the rude masonry of the Romans forming the triple entrance and projecting 2 feet 5 inches from the face of the walls which flank the transept. This work is rough and the stones are rudely squared and set open joint in lime with a rough pick face dressing. On either side of this masonry, at its junction with the late work, the bonding is broken. On the west side the later work has been bonded directly into it and finished in the same face, while on the east side—where the later work is set back 2 feet 5 inches—the stones project in broken bond, no attempt having been made to make a clear finish at the projecting angle.

On the south wall, from the west wall of the transept 55 feet 9 inches westwards, and for the whole length from the Roman masonry eastwards, including the eastern tower, there occurs a distinct style of masonry with pilasters varying from 5 feet 2 inches to 5 feet 8 inches wide, and projecting 5 inches from the inter-wall spaces, which vary from 11 feet 8 inches to 13 feet 5 inches. This masonry is crowned by an inverted ogee moulding (*see* detail on Plate IV) 5 inches deep, the top of which is 11 feet 6 inches below the sills of the mosque windows. The wall is seen only about two courses high, as the covered bazaars hide all the lower part of it, the two eastern pilasters are not visible from above, but can be seen in the shops below. A fragment of this wall is to be seen butting against the earlier wall at the west end, and I am of opinion that the internal wall of this tower also belongs to the same period. At the junction of the eastern tower with the south wall there is a vertical joint where the upper storey mosque wall butts against the tower, but the lower pilastered wall continues in unbroken bond across the tower wall. Further, in the inside of the mosque, in the west wall of the eastern tower, a string course similar to the capping course of the pilasters exists at exactly the same level. Above this string course are traces of eight filled-up recesses for beam rests about 15 inches square, and at a corresponding level, traces of the same number of filled-up recesses can be seen in the east wall of the western tower. From these facts it seems probable that we have here the remains of the Christian church as extended by Arcadius in the fifth century. There is every reason for the assumption that the upper storey wall—which is set back 3 inches from the lower storey wall, and which is not bonded into the eastern tower—is the wall of El Walid 705 A.D. Contrary to the testimony of the Arab

historians, we have the proof that El Walid in his mad rage did not totally destroy the Christian church, from the evidence of the Roman entrance still seen, hence the existence of a wall, which is earlier than that of El Walid and later than the Roman wall, may safely be assigned to the period of the Christian church. In the modified pilaster design it is easy to trace the influence of the earlier remains which had been incorporated into the Christian church by the architect, who apparently wished to bring the old and new into harmony. A careful study of the masonry of the lower parts of the west and east minarets has satisfied me that it also belongs to this period and may be the remains of the watch towers of the church, as Mr. Spiers suggests.

The upper storey wall (*i.e.*, the wall above the capping course) extends of the same character, from the point where it butts against the eastern tower on to a point 140 feet from the western tower, where it is broken by a later restoration. This masonry is very uniform in character, the courses average 2 feet 4 inches high and the dressing is fine pick. Stones are well squared and set in lime. The later restoration is quite distinct and is executed of reused stones, which are not coursed in harmony with the other work, and the bed lines are not continuous, while the window arches are formed of small voussoirs. This restoration has apparently been from floor to eaves, as all traces of the pilastered wall are lost. Probably this dates to one of the destructions by fire in the eleventh or fifteenth centuries. At this point there is a low circular-headed door, now filled up, 6 feet wide.

I carefully examined the interiors of the west and east towers and feel satisfied that they are of an earlier date than the minarets, in both cases the junction between the later and earlier masonry can be seen. The lower earlier masonry is of large stones averaging 29 inches high, pick-dressed, and at a distinct level can be seen the first course of the Mohammedan period which characterises the minaret masonry.

I was lucky enough to make the acquaintance of M. Apéry, the municipal architect of Damascus, in whose hands the restoration of the mosque is, and he kindly gave me a tracing of his plan of the mosque and accessories. By this help I was able to check the plans sent me by Mr. Spiers and correct a few inaccuracies, and my external measurements correspond with M. Apéry's plan.

The columns and arcade of the west end of the south aisle are still standing in a more or less shaky condition, but the other arcades have been entirely removed. The columns rest on low stone pedestals measuring 3 feet 3½ inches high; the average diameter of the columns is 2 feet 8 inches, and the height, including base and neck, 16 feet 5 inches. The caps measure 3 feet 3 inches high, and the dosserets 2 feet 4½ inches high, and the height from top of dosseret to actual spring of arch 1 foot 6 inches. The inter-columnar spaces vary very considerably, but the average distance is 14 feet. All these measurements I have from M. Apéry.

Sir Charles Wilson, in his notes on the mosque, taken in 1865,

writes :—" A good deal of the church possibly still exists in the mosque, which, from its orientation, appears to have followed the form of the church." I carefully examined the columns of the south aisle arcade west of the transept (the only one now standing), and found that they rested on solid stone pedestals with good foundations. Assuming that the Roman gateway in south wall was used in the Christian church, the church would in all probability have had its floor at the same level as the Roman platform, and the present mosque pavement, 3 feet 3 inches above this platform, would consequently belong to the Mohammedan period. The pedestals of the columns are designed and built to suit their present level, and I think, therefore, that the setting of the columns as they now exist must be Mohammedan work. Moreover, a redistribution must have been rendered necessary after the insertion of the transept which did not exist in the Christian church. This does not, however, materially affect " the form of the church," which, I think, has been retained, as it is quite probable, from the evidences in the south. east, and west walls, where old walls have been used, that the internal arcades are in the same line as those of the Christian church, the old foundations being simply raised and the old columns reset.

A study of the dome and transept piers proves Mr. Spiers's theory that the dome was an afterthought. A straight vertical joint in each pier exists between the transept arch piers and the piers carrying the dome, and the horizontal beds are out of line. The three windows in the centre of the east and west transept walls belong to the transept before the insertion of the dome, and the arches carrying the dome necessitated the blocking up ; the line of the centre window sill can be seen about 9 inches below the soffit of the apex of the arch. This also proves the existence of a transept with clerestory windows on the east and west sides before the dome was thought of, and also before the high-pitched roofs were introduced.

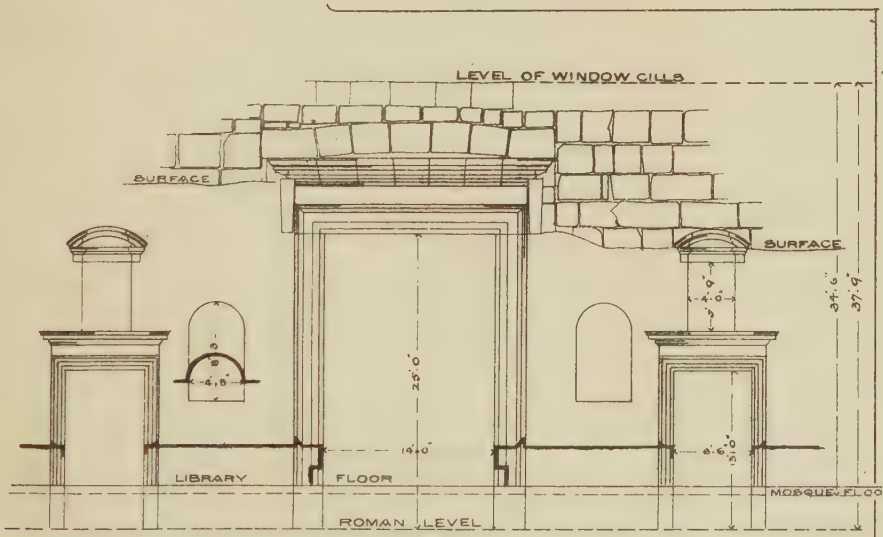
On looking at the ground plan (Plate I) it will be seen that the south pier of the east transept arch comes 2 feet 6 inches into the void of the great Roman doorway (now built up) in the south wall, on which is the famous incription which leads to the belief that this door was utilised in the Christian church. It is quite apparent, therefore, that this doorway and the transept could not have been in use contemporaneously ; consequently the door could not have been used by the Moslems except, perhaps, at the time when they entered by the same door as the Christians before the destruction of the church by El Walid. Thus if we are right in supposing that this door was utilised after the extension of the church by Arcadius, the transept cannot be Christian, and may therefore be the work of El Walid.

The whole of the walls outside and inside show signs of having been at one time covered by a thick coat of plaster. On the east and west sides of the transept walls the plaster still exists, and the raking lines of the pitched roofs are marked on it. To the right of the central window in the transept over the north aisle I saw a piece of red and black line decoration on the plaster.

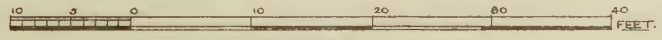
REMAINS OF TEMPLE E
— AT —
DAMASCUS —

— DETAIL OF NICHE PEDIMENT —

— SECTION —

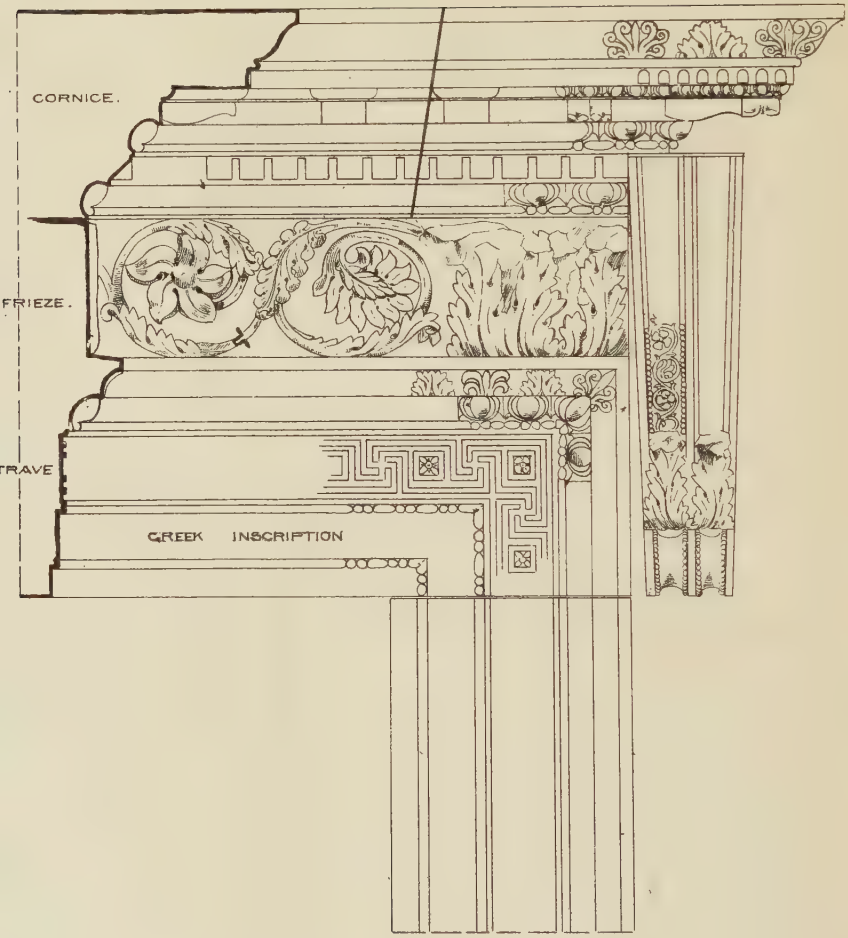


— TRIPLE GATEWAY IN S. WALL OF MOSQUE —



— SCALE —

CLOSURE



DETAIL OF CENTRE GATEWAY.

12 6 0 1 2 3 4. FEET

SCALE FOR DETAILS.

Meas.d & drawn by Arch. C. Dicks Feb.97.

The fragment of decoration on the north exterior façade of the transept is a mosaic representation of buildings and trees, similar to the mosaics on the inside of the same wall. The sheikhs of the mosque informed me that these were representations of Mecca and Medina. Mr. Spiers quotes Mukaddasi as follows:—"The columns round the court are all of white marble, and the *vaulting of the arcades* and the arched windows above are adorned with mosaics and arabesque designs." I would suggest that the "*vaulting* of the arcades" be translated the "*spandrils* of the arcades," as I fancy this is what Mukaddasi meant in his description. Fragments of mosaics still exist on the spandrils of the first four arches of the court arcade at the west entrance—Bab el Berîd—and extend from the cap upwards, almost as high as the sills of the upper windows, evidently the remains of a mosaic decoration over the whole face, as Mukaddasi tells. These mosaics are similar in character to those on the transept north wall, and I believe a great part of the design still exists behind the plaster and whitening. The same correction might be made on the word *vaulting* in reference to the arcading of the mosque itself as this probably also means the "*spandrils*," instead of the soffits of the arcade, as Mr. Spiers suggests, in both cases.

The whole of the marble panelling and other interior decoration of the mosque is now entirely destroyed, and scarcely a trace of it remains amongst the *débris*, possibly much of it has been collected and carried to a place of safety for after use in the restoration, but I could get no definite answer to any of my inquiries about this.

The height from sills of windows in south wall to level of present mosque pavement is 34 feet 6 inches (per M. Apéry), and I make the level of the sill of the Roman gateway 3 feet 3 inches below this. The level of the street opposite this gateway is about 32 feet below the window sills, but as it is at present partly filled with rubbish I could not get the exact finished level.

At the western tower the architrave (about 24 inches high) and dentil cornice above the pilaster at the western angle seem—from the bonding—to belong to the period of the pilasters below, but above this I think the tower is later, as at the junction of the west wall with the tower there is a straight joint in a vertical line 12 inches to the south of the left angle of the pilaster under the junction (*see* sketch, Plate IV)—this latter upper building is crowned by an egg-and-tongue moulding. I do not think the battlements are as early as the time of Mukaddasi. They are extremely patchy, rude in design and workmanship, and are covered by a coat of plaster over walling of small rubble stones, unlike the character of the other early Mohammedan work.

I now come to the Roman remains in and around the mosque enclosure. The great doorway in the south wall of the mosque turns out to be the centre one of a triple entrance, the side doorways having niches over them, and in the side piers between the doorways are plain circular-headed niches at a lower level (*see* Plate II). I was able to take accurate

measurements of the detail of the centre doorway and part of the circular-headed niches, but was not allowed to measure the side ones. However, I have got their proportion and relative positions correct in general, and I saw as much of the detail as enabled me to make a sufficiently accurate restoration. The central doorway measures 14 feet wide, and works out to 25 feet high, lintelled by one stone which forms both architrave and frieze, and measures over all 4 feet high by 19 feet long. The side doors measure 6 feet 6 inches wide by 13 feet high. The piers between doors measure 15 feet broad from void to void, and in them are the circular-headed niches, 4 feet 8 inches wide by 8 feet 3 inches high. The niches over the side doorways measure 4 feet wide and about 5 feet 9 inches high — without architrave or pilaster, but crowned by a frieze and circular-headed enriched pediment. The upper part of the great door and the head of the east niche can be seen from the top of the bazaar roof, and by looking down the hole in the vault abutting on the mosque wall—mentioned by Porter—I could see the head of the western niche and also the cornice of the door below it. To be let down this hole by a rope seemed at first the only possible access to this compartment, as we were repeatedly told that there was no other entrance to it. However, M. Apéry came to our assistance, and informed us that there was a way from the interior of the mosque by a door about 45 feet to the west of the part we had seen. After a good deal of trouble we were able to prevail upon the sheikhs to admit us, and although a thick coat of plaster covered the most of the detail, I was able to gather enough to make a restoration and to get a few of the leading measurements.

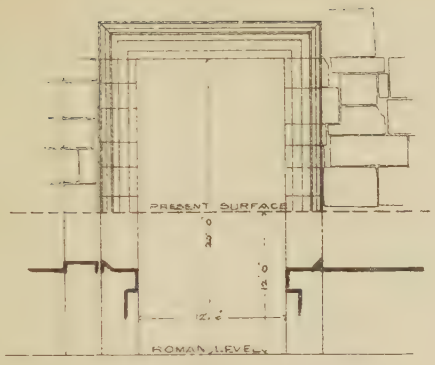
The west side doorway comes in the centre of the transept south wall, and its opening has been utilised to hold the principal mihrab of the mosque. The usual proportion of such doorways (viz., twice the height of the width) does not work out in all three. The side ones come out to this proportion, but the centre one has only 25 feet of height to 14 feet of width. On account of the puzzling character of the later masonry and the plaster on the wall, besides the enforced "snap-shot" nature of my sketches and observations, I was unable to study this point thoroughly. In the interior of the mosque—where the plaster is broken off—I could see the inner angle of the western pier of the centre gateway.

At 380 feet east of mosque, in line with the east and west axis of the mosque buildings, is a triple gateway. This gateway is to the east of the piers in line with the colonnade which Porter discovered and took to be the piers and columns of an archway similar to that on the west of the mosque. On examination I soon became convinced that this triple gateway was an entrance through an enclosure, and not through a colonnade as has been suggested by Porter. Although only very small fragments can be seen from the street, by careful working in the shops on either side and in the dwelling-houses above, burrowing under stairs and judicious purchase of occasional small areas of loose plaster, I was able to recover as much of the detail, *in situ*, as allow of a fairly

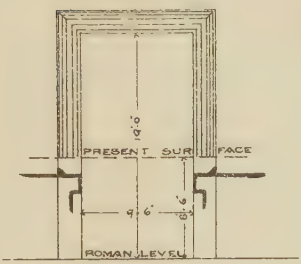
REMAINS OF TEMP

AT

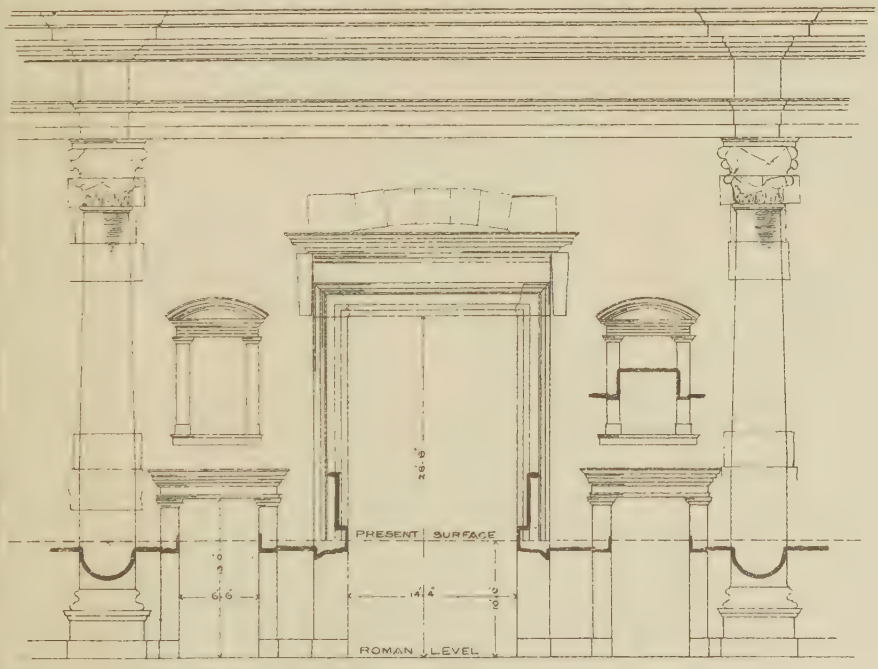
DAMASC



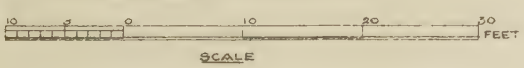
S. GATEWAY



N. GATEWAY

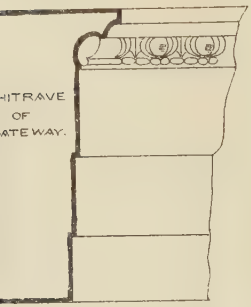


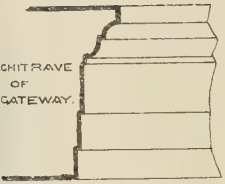
E. TRIPLE GATEWAY

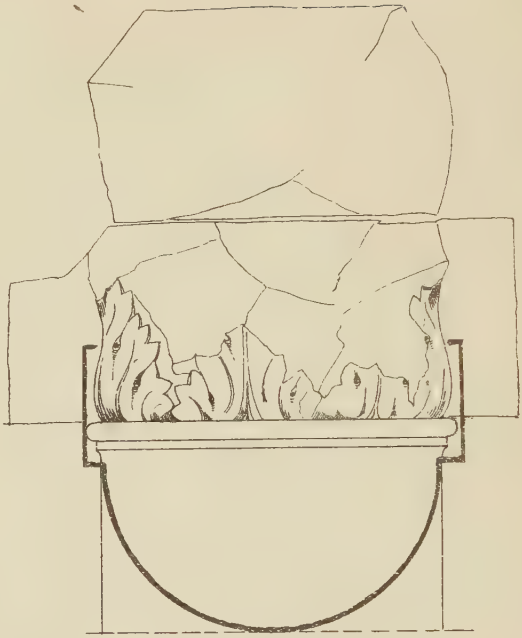


SCALE

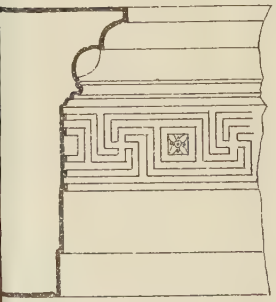
E ENCLOSURE



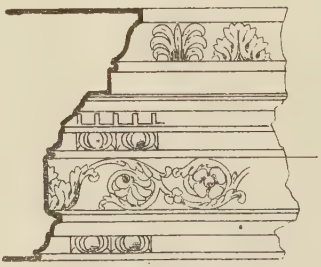




CAP OF HALF COLUMN.



ARCHITRAVE OF CENTRE GATEWAY.



CORNICE & FRIEZE
(SIDE GATEWAY.)

CAP & FRIEZE
(NICHE)

SCALE FOR DETAILS.

Meas^d & drawn by
Chas^s C Dickie
July 97

accurate restoration (*see* Plate III). This restoration, as can be seen on comparison, is very like the triple gateway in the south wall of the mosque. I could find no traces of the columns of the western face of this gateway drawn by Porter in line with the colonnade, as I could not get access to the houses at the places where they could have been seen. However, from Porter's description, which tells that they were similar to the fragment of the gateway standing to the west of the mosque, and which fits in with the design of the eastern face of the triple gateway, the complete design of this entrance, in the form of a Greek propylæa, can now be considered as recovered. Much of the detail I have restored from the south gateway, the general similarity between the two justifying such. Set at an angle of 175 degrees, the centre gateway measures 14 feet 4 inches wide, and works out to 28 feet 8 inches high, giving the side entrances the same proportion of height to width, viz., 6 feet 6 inches by 13 feet. This brings the Roman level to 10 feet below the level of the present street. The parts I saw are as follows, viz., the two great architrave piers of the centre doorway, which, as far as I could make out, are monoliths, measuring 28 feet 8 inches high, 6 feet 6 inches deep, and 2 feet 9 inches broad ; the lintel is broken across at its bearing, but the return of the architrave moulding still exists. The frieze and cornice are gone, but I found one of the scroll brackets similar to those on the south doorway used as a doorstep in one of the adjoining houses. The right-hand niche I found in two houses, half in a staircase and half in a room, and by clearing off some of the plaster I recovered the pilasters, caps, and architrave. The niche measures 4 feet 9 inches wide. Partly under this staircase and partly used as one of its steps, is a piece of the cornice over the lower doorway in very good preservation, and on the frieze is cut an Arabic inscription, of which I took a squeeze, but owing to the unfavourable time of its taking, it was not successful, and another one will have to be made. This, Dr. Masterman is attending to. To the left of the great doorway the corresponding cornice of the side doorway can be seen, built into the back wall of a grocer's shop, and hidden by his stock of merchandise. The two columns which flank the design can be seen above the roofs of the houses and in the shops below. They stand isolated above, and the connecting wall is entirely gone, but the half columns and the bonding ears on either side are sufficient to show that they were attached.

The great archway to the west of the mosque was difficult of access, and I succeeded only in making a rather incomplete study of it. The columns (*see* Plate IV) are 4 feet 9 inches in diameter, and the square pilastered piers on flanks measure 5 feet 7 inches on face (exclusive of half column attached). The pilasters on face measure 3 feet 7 inches broad, and have a projection of 14 inches, while the pilasters on side of pier are 4 feet 9 inches broad on face and project 12 inches. The intercolumnar space in the centre is 18 feet 6 inches, and the side intercolumnations 8 feet 6 inches and 6 feet 8 inches respectively. The detail of the architrave and pediment is similar in character to the

other remains to south and east ; the architrave measures 2 feet 7½ inches over all, and the frieze 18 inches broad, while the pediment cornice is 3 feet 7½ inches thick. By climbing over the roof of the new bazaar I got to the back of the pediment, which I carefully examined, and found the masonry rough and unfinished, having evidently been hidden by a roof towards the west. I could not get full measurements taken of the pediment, as I was warned off just when commencing by an indignant householder. The arch across the central space is partly hidden by the bazaar roof, and as I did not care to take many liberties at that particular place, I had to leave without measuring it.

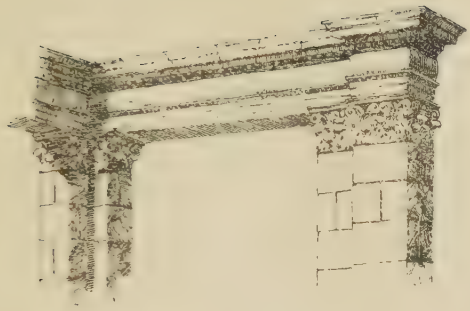
To north and south of the mosque, about 500 feet from axis of gateway, are the traces of a peribolus wall in which are single gates, through which the present streets pass (*see* Plate III). The gate to the north is a simple opening with an architrave moulding around it, measuring 9 feet 6 inches wide and 10 feet 6 inches high from the present level of the street, which gives the level of the Roman street 8 feet 6 inches lower, assuming the proportion of height and width to be two to one, like the others. The architrave is 21¼ inches broad, with three fascias and plain moulding, which has only been partly cut, the rest being still in rude block. This gate is set at an angle of 85 degrees, and on either side the wall extends for some distance to west for 20 feet, and to the east for 50 feet, standing 10 courses high, courses varying from 28 inches to 36 inches high, roughly squared, and set in lime, wide joints ; the dressing is rough pick, and the wall is back-set vertically at intervals, forming a series of pilasters with 11-inch projections 8 feet 6 inches wide, and the inter-wall spaces 8 feet 4 inches wide.

The single gate in the south wall is similar in style, but larger, measuring 12 feet 6 inches wide, and at present 13 feet high ; thus we may judge the level of the Roman street to be 12 feet below the present. The architrave is 3 feet ⅛ inch broad, with three facias and an egg-and-dart moulding. A fragment of wall extends to either side of the gate—to the east for about 15 feet, and to the west for 26 feet—lying at an angle of 86 degrees, five courses high, courses varying from 2 feet 4 inches to 3 feet high, setting, dressing, and jointing in every way similar to the wall on the north side, and the wall built into the centre of the south wall of the mosque, to both of which it runs parallel.

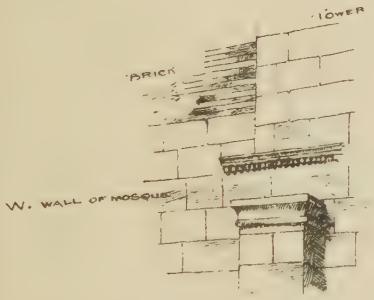
A glance at the drawing (Plate III) on which is shown the stone bonding of the wall and gate at once suggests an insertion into an earlier wall. The large open vertical joint between the west architrave and the wall, and the irregularity of the coursing, besides the proportion and position of the pilaster on the west, seems unlikely in a contemporaneous construction. On the east side the bonding of the wall and architrave points decidedly to a later insertion of the gateway. Running northwards at right angles to this wall, as shown on plan, is a piece of wall built of similar stones. I only saw the west face of this wall, and the masonry is irregular and patchy, many pieces of columns being built into it. It stands five courses high, and extends for about 30 feet, lying at an angle of 175 degrees.

REMAINS OF MOSQ
AT
DAMA

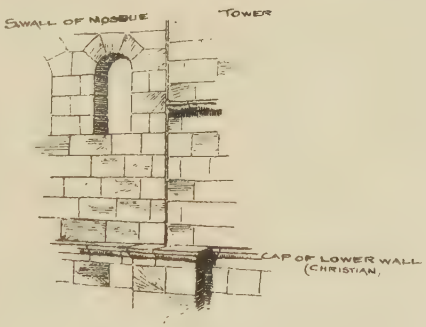
SKETCHES



ROMAN PIERS EAST OF BAB JERÛN



JUNCTION OF W. WALL WITH S.W. TOWER ABOVE PILASTERS



JUNCTION OF S WALL WITH S.E. TOWER SHOWING BONDING OF LOWER STOREY WALL

E & TEMPLE ___

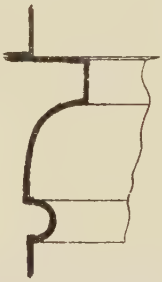
SCUS ___

- DETAILS -

DENTIL COURSE ON S.W. TOWER

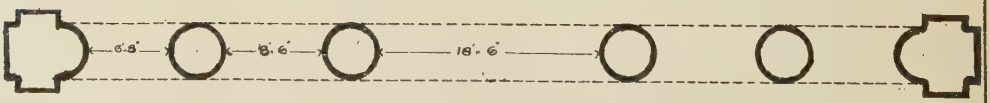
ENTABLATURE OVER
GREAT WESTERN ARCHWAY

STRING COURSE ON
LOWER S. WALL



PILASTER CAPS. W. WALL

SCALE OF DETAILS



PLAN OF GREAT WESTERN ARCHWAY.

Meas^d & drawn
by Arch^t C. Du Nu
Feb. 97.

At 145 feet west from the gate is another piece of wall, extending for 7 feet 5 inches westwards, at the same angle as the gate, but projecting 6 feet beyond its line, then turning northwards exactly at right angles for 45 feet 7 inches, where it returns for 6 feet. This wall is built of stones exactly similar in proportion and dressing to the other walls I have just described, and stands for about 20 feet high, forming the outside wall of a house, facing the street. The pilasters vary from 6 feet to 6 feet 6 inches broad, and have a projection of 11 inches, the interspaces averaging from 6 feet 8 inches to 6 feet 10 inches. From this 6-feet return a wall continues in rather a broken face, also facing the street, for a distance of 134 feet 6 inches. The same class of masonry continues, and the same system of pilasters, which, however, vary considerably in width, from 4 feet 11 inches to 8 feet 2 inches. The angle of this wall is 180 degrees, 5 degrees off the line of the piece at the angle, hence not at right angles to the gates. I cannot account for this change of direction in any way, as the bonding at the angle of junction with the projecting part is apparently contemporaneous. The stone on which is cut the Greek inscription mentioned by Porter on page 60 of his book is built into this angle. He says :—"A short distance from the school is a fragment of an ancient building, in which, on an inverted stone, is a Greek inscription; but a portion of it is now covered by a modern wall." The "modern wall" is the wall I have just described. I do not know Porter's reason for calling this wall more modern than the other part, as on comparison of the masonry and a study of the bonding both walls seem of the same period, although the change of direction comes in awkwardly. Were it so, it would considerably facilitate the theory of its connection with the other remains. Perhaps the inscription throws some light on it.

The only other piece of wall which I have now to describe is a piece built into a street wall 330 feet to the north of the eastern triple gateway. This fragment runs parallel to the gateway, angle 175 degrees, but is not in line, being 12 feet back—*i.e.*, west of the gate-line. It stands six courses high, and is 34 feet long; courses vary from 3 feet 1 inch to 2 feet 1 inch high, and dressing and setting are exactly similar to all the other masonry I have just described. One entire pilaster exists 8 feet 4 inches wide, with a projection of 9 inches. The inter-wall measures 13 feet 3 inches wide.

I now come to the colonnade (mentioned by Porter), the remains of which are to be found built into the walls facing the streets running parallel to the east, west, and north walls of the mosque (*see* ground plan, Plate I). I found in all 31 columns; commencing at the eastern gate at 70 feet west from its outside face and 90 feet north of the north pier of the centre gateway, the first column occurs and the colonnade continues at an angle of 176 degrees for 345 feet. Eighteen fragments are *in situ*, some standing to a height of 25 feet while others only appear a few inches above the street level. As near as I could make out their diameters are about 4 feet 6 inches, but they seem to vary somewhat; the intercolumnar

spaces are about 9 feet. The colonnade then turns westwards and continues in a similar manner for a distance of 1,038 feet at an angle of 86 degrees. In this line I found 12 columns. Only one column exists on the west side between the north-west angle and the first pier of the great archway, a distance of 398 feet.

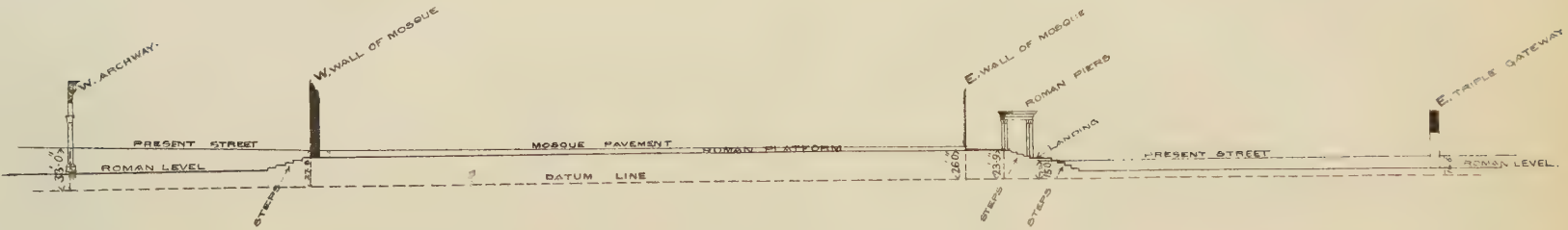
The piece of wall to the north of the gateway is probably a remnant of the east wall of this enclosure, and the difference of its line can easily be accounted for by supposing that the gateway projected beyond the line of wall in order to give greater prominence to it. The gate and flanking fragments of wall on the north are the only remnants of the northern enclosing wall, and the gate and pieces of wall at the south-west angle are the remains of the south and west enclosures. The almost continuous line of columns running parallel with these pieces of walls, at a distance of 50 feet from them, is a connecting link between the rather fragmentary remains of the enclosing wall and supplies the continuity wanting in the wall itself. The piece of wall running northwards from the gate on the south when extended gives the same distance, 50 feet, between it and the colonnade as is seen on the north and east sides. From the similarity of direction and distribution of all these remains, besides the evidence of masonry and architectural detail, I think it seems pretty certain that we have here the remains of the four-sided enclosure with portico of the Roman temple, such as is found at Palmyra in the Temple of the Sun. The masonry extending beyond the west inferred line at the south-west angle may possibly be the remains of buildings of the same system, forming part of this vast enclosure, measuring over all 1,000 feet from north to south and 1,300 feet from east to west.

The difficulty encountered by Mr. Spiers in relegating the great archway west of the mosque to a connection with the temple buildings is now obviated, and the peculiarity of its face being towards the east can be accounted for by making it the eastern façade of the western entrance designed in the form of a Greek propylæa, its western face being in the enclosure wall, similar to the triple entrance on the east side. These two gates lie practically in the central axis of the great enclosure, which also cuts through the centre of the western Syro-Greek wall of the present mosque. This enclosure probably existed before the Roman period, as is evidenced by the masonry of the wall at the south single gate which indicates a later insertion of the gate. Thus it might be argued that it existed contemporaneous with the pilastered west wall of the mosque, the Romans introducing their gateways into the then existing enclosure and possibly destroying the entrances of their predecessors.

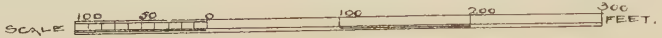
I searched carefully to the south of the mosque for the remains of the colonnade drawn by Porter, supposed by Spiers to be the *temenos* of the temple, but could not find any traces of it remaining. However, a merchant of the shoe bazaar informed me that the drums of four columns at one time existed in front of his shop, but that they had been removed when the bazaar was being rebuilt at that point. I asked him to show

Section to face page 274.

TEMPLE & MOSQUE AT DAMASCUS



GROUND LEVELS, W. TO E. GATEWAYS.



Arch. C. Dickie
May 97

me the positions and he marked out four points which on measurement I found to come just where Porter shows the four piers at the south-west angle. Those he saw at the south-east angle I could get no clue to, but in a carpenter's shop built against the south wall of the mosque, I found the remains of a column against the tower wall, which comes exactly in the eastern line of this colonnade. To the north of the mosque I found four columns standing to a height of 13 feet. Two were built into the wall of a house and were visible from the exterior, and another two stand in the interior of the same house. They measure about 3 feet in diameter, and are at an angle parallel with the outer enclosure walls above cited. It is difficult to associate them effectively with the other colonnades, but all round this quarter I found remains of columns built into the walls—used as wall copings, &c.—which seems to point to the existence of an extensive colonnade here. They may be the remains of a northern double colonnade, corresponding to the one found by Porter to the south, and the continuation of the east and west lines in the mosque court arcade is certainly suggestive of connection, and although the small proportion of these arcade columns rules out the probability of their being part of this original colonnade, still they may be on the old foundations. I do not think it probable that the north arcade of the mosque court is on the line of any old foundations of the temple buildings, as its angle cannot now be explained by the suggestion that the line of an existing street influenced it. The west wall fits in awkwardly with this theory, and it, with the triple gateway in the south wall point rather to an inner enclosure with colonnades in front of the north and south entrances. In this case the east and west walls of the present mosque seem to show the limits of this enclosure, and the fact that the north entrance of the court of the mosque is in the same axis as the centre doorway of the triple entrance on the south is strong evidence to show that the position of the north entrance to this inner enclosure had been retained by the Moslems when they built the mosque The actual temple, in this case, would have stood in the centre of this enclosure, the proportions of which, viz., 305 feet south to north, and 510 feet east to west, suggest an east and west orientation, thus giving sufficient space between the temple itself and the enclosure walls. The axis of the north and south gateways comes 30 feet to the east of the central axis of the outer enclosure according to this theory, and on this account is not re-assuring, but considering that the Romans adapted and only partly remodelled an earlier temple, which in its turn may have only been a partial rebuilding of a still earlier example, this difficulty may not be a serious one. The fact that the inner enclosure does not come into the centre of the outer enclosure is not an objection, as there are other examples of this peculiarity, as at Baalbek and Palmyra.

A study of the relative levels supports this theory. A glance at the section of the surface levels (*see* Plate V), from the archway to west of the mosque, eastwards through the court of the mosque to the eastern gateway, shows a fall of 5 feet 4 inches from the western archway to the

floor of the mosque at the west entrance ; from west entrance to Bab Jarû the court floor falls 1 foot 8 inches, while from Bab Jerûn to the bottom of the present steps in the street is a fall of 11 feet 8 inches, and from this point the street rises 1 foot to the eastern triple gateway of the outer enclosure. The measurements of the eastern triple gateway give the Roman level at 10 feet below the present street, and the measurements of the triple gateway in south wall of the mosque gives the Roman level at 3 feet 3 inches below the level of the mosque pavement. Thus —as the sectional drawing shows—the floor of the inner enclosure was 18 feet higher than the colonnaded way leading from the eastern triple gateway to the eastern portico, allowing of a flight of 32 steps (7-inch risers) up to the level of the inner enclosure pavement. This ascent was probably made in two flights, as I have indicated on the section, the lower outside flight leading on to a broad landing in front of the piers and east of the portico, the upper flight being cased within these piers and leading to the portico. The present steps indicate such a plan, as they are in two flights with a broad landing between.

On the west side the colonnade also works out to a lower level than the inner court, but as I was able to take only a very rough measurement of the height from the caps of the archway columns to the street, I cannot absolutely guarantee the correctness of the relative levels ; but it is certain that the Roman street was considerably lower than the platform of the inner court. The height from the top of the caps to the present street is about 26 feet, and taking the height of the columns at 8 diameters, and including for the height of a pedestal, the Roman level would be about 20 feet below the present street at this point, and 10 feet below the level of the inner court platform, thus allowing of a flight of 17 steps.

To the east of Bab el Jeirûn are four piers, as shown on Plate I. They rise up through the roofs of the buildings which surround them, and I first saw them from the top of the "Minaret el Aisa." Their positions in relation to the mosque I cannot absolutely guarantee, as the difficulties under which I measured them were far from favourable to correct planning. However, I think they may be accepted as generally true, although my notes were taken from eye observations and very rough general measurements. The northern two piers I measured carefully, and the westernmost one measures 38 inches on face, and the eastern double one 36 inches and 35 inches respectively on the two faces, the latter projecting 21 inches from the former. The space between the piers measures 14 feet, and the piers themselves stand almost entire—the height from neck of cap to present street being about 33 feet, the cap being 3 feet 6 inches high. The 14-feet opening is lintelled by an architrave with three facias and egg-and-dart moulding, with a plain slightly bulging frieze and enriched cornice over, of similar design to the other Roman work. The architrave, frieze, and cornice return round the east, south, and north faces of the eastern double pier, and do not lintel southwards or northwards, the design ending with the pier which stands

isolated, unless where connected by the lintelling towards the west. The cap has no neck mould, and the foliage is similar to the other work. On the north side of the pier the cap continues the whole width of the two piers, 5 feet 11 inches, in an unbroken band of foliage, as there is no projection on the north side. The mouldings and carving are exactly similar in character to the other remains I have described, and the angle of the piers is similar to the other, 86 degrees. The piers to the south I saw from the roof of the house where I measured the north pier, but was unable to get access to them. However, a few observations gave me the general position, and I could see enough to assure me that they were similar to what I had measured, and part of the same feature. I imagine that the present portico, as shown on Plate I, shows the limits of the Roman portico, although it differs somewhat from that planned by Porter, in this case the four projecting piers fit in admirably with the design. The isolated entablatures seem curious, and call for some crowning features, such as statues.

The columns of the eastern and western colonnade have now entirely disappeared, and except the one column I have shown black on plan inside of the eastern gate, I could find no clue to their positions. The position of this one column seen by me seems to suggest smaller intercolumnar spaces than Porter has shown, and harmonises with the intercolumnation of the portico, within the great enclosure. The four columns to the north of the mosque also give the same proportion of spacing.

This completes my work on the Roman remains. I have not been able to find any traces of the temple itself, but I think its site and orientation may now be guessed with a fair amount of assurance. A striking resemblance to the temple enclosure at Jerusalem can be seen in the outer and inner enclosures, as well as in their proportions and the raised inner court, while probably the temple was also raised above the inner platform. The same similarity can be seen in the Temple of the Sun at Palmyra. It does not seem at all improbable that the Temple of Solomon might have been the model on which the Damascus Temple was built, and this plan retained by the Romans, restored on the ruined walls of the Temple of the Seleucidæ, who may have used the site on which the Syrian Temple dedicated to the God Rimmon once stood.

A word on the general character of the details of these remains. The profiles of the mouldings are finely designed, although not delicate, and every member tells its value. The enrichments are artistically designed and tastefully applied, carved in a bold and broad style. I made comparisons with the work at Baalbek, which seems to belong to a much later period. Here the detail is refined until it has lost all its character and value, and harmonises badly with the imposing proportions of the buildings which it decorates. In fact, it looks almost renaissance in character. The mouldings are delicately designed and as delicately worked, but they are intricate and wasted. The carved enrichment is beautiful in itself, but inartistically applied—crushed together in a

meaningless way. I should be inclined to date the Damascus work to a period during the reign of Trajan, 98–118 A.D., probably the work of Apollodorus.

Could permission to search at will be obtained, I have no doubt that many more interesting fragments still exist, built into the houses which crowd around the locality. To lose a clue through the obduracy of a jealous householder, whose suspicions or cupidity demand either instant withdrawal or an exorbitant backsheesh, is a sore trial in pursuing archæological research in and around the domiciles of a Mohammedan population. I had many disappointments in being unable to get admission where I hoped to find a clue, which seemed invaluable.

JERUSALEM, *April 27th*, 1897.

THE GREAT MOSQUE OF DAMASCUS.

By R. PHENÈ SPIERS, F.S.A.

THE plan and the detailed description of the Great Mosque of Damascus and its environs, given by the Rev. J. S. Porter in his work published in 1855, were so complete that scarcely anyone since seems to have thought it worth while to take up the subject afresh. Besides this, ever since the great massacre of 1860, visitors have been somewhat chary in their desire to sketch or measure, owing to the fanaticism of the inhabitants; in fact, with one or two rare exceptions, no one was allowed to draw inside the mosque. This may to some measure account for the almost entire neglect of the subject in the *Quarterly Statements* of the Palestine Exploration Fund.

In the spring of 1894, when first I heard of the disastrous fire which in October, 1893, had destroyed the mosque, I published in the "Builder" a reproduction of a water-colour drawing, which I had been permitted to make in 1866, of the interior of the great transept showing the great arches and the pendentives carrying the dome, and with it a short description of the building. Its publication led to a discussion which was carried on in the same paper for some weeks, as to which portions of the building were Christian and which Mohammedan. Various theories were put forward, and the only conclusion I was able to come to was, that without a carefully detailed plan and a minute examination of numerous drawings and photographs, and among the latter some valuable examples lent me by Dr. Wright, it would be impossible to arrive at any satisfactory result. Comparison of the drawings and photographs with Porter's plan showed me at once that the latter was not altogether reliable so far as the interior was concerned, and in my dilemma I applied to Sir Charles Wilson, who informed me that the plan he had lent Fergusson, and which was published in his "History of Architecture," was based on one measured and plotted by him in 1865.

It was true that the interior only was published, the inclement weather towards the end of the year having prevented Sir Charles Wilson from completing the task he had set himself. Here at all events were some definite dimensions to start upon, and resolving the perspective in the photographs to their geometrical dimensions I was able to work out elevations and sections of the whole building. Before this was completed my attention was directed by Professor Lewis to Mr. Guy le Strange's translation of the works of the mediæval Arab geographers published in 1890, which gave me a new interest in the work, as in the various quotations given I fancied I could read the whole history of the mosque from the time it was stated to have been entirely rebuilt by Al Walid in 705 : frequent references also were made to the pre-Christian structures round the mosque, so that with the assistance of Porter's map I was able to work out plans of the immediate enclosure walls not shown in Sir Charles Wilson's plan as published by Fergusson, and some of the archways and colonnades in the immediate vicinity.

The whole subject as worked out formed the subject of a paper which I read before the Royal Institute of British Architects in November of last year. Within three days of the delivery of the paper (read a month before it was really due) I received a long letter from Dr. Masterman of Damascus, answering a series of questions I had put to him, which showed me that in two cases my elevations were inaccurate, viz., the position of the great doorway in the south wall, and the number of pilasters at the south-west end not being correct. Beyond that, however, Dr. Masterman informed me that the fire of 1893 had destroyed the bazaars on the west side *exposing the west wall which was decorated with pilasters similar to those at the south-west angle hitherto thought to be only a tower*. This and other information was laid by Sir Charles Wilson before the Palestine Fund Committee, who decided to send Mr. Dickie, their architect at Jerusalem, on to Damascus to make fresh researches and to report on the same. The Committee also did me the honour to ask me to write an article giving the substance of my paper delivered at the Institute. I propose in my description to utilise the information given me by Dr. Masterman subsequent to the reading of my paper and also that contained in Mr. Dickie's report.

Damascus is one of the oldest cities in Syria ; it was already a noted place in the time of Abraham, and it is often mentioned in Scripture. In B.C. 333 it fell into the hands of Alexander the Great, and afterwards it was divided between the Seleucidæ and the Ptolemies. About a century before the Christian era, in 114, Antiochus Cyzienus took the half of the kingdom of the Seleucidæ and fixed his residence at Damascus. In B.C. 84, Aretas, King of Arabia, took possession of the city ; and in B.C. 64 it submitted to the Romans under Pompey, and the proconsul occasionally resided there. Aretas, the father-in-law of Herod Agrippa, seized Damascus about A.D. 37. During the reign of Trajan, A.D. 98–118, Damascus became a Roman provincial city : and Apollodorus of Damascus, the most celebrated architect of his time, who built the

bridge across the Lower Danube, may possibly have carried out some of the work there. To the peaceful reign of Antoninus Pius who followed (138–61), and who was one of the greatest builders in Syria, we may ascribe the great arches at the east and west ends of the mosque. To this monarch and to his successor, Marcus Aurelius Antoninus (161–80), we owe the principal temples and monuments at Baalbec, Gerasa, Palmyra, and other great Syrian cities erected under Roman rule. Damascus remained in the possession of the Romans till A.D. 260, when it was taken by Sapor I, the Sassanian king.

Some years after the accession of Constantine, and when Christianity became, in A.D. 323, the established religion, Damascus was constituted an episcopal centre, with 15 dioceses. After this, for more than three centuries, the records are very scanty. The temple is said to have been converted into a church by Theodosius in 379, and, according to Mr. Porter, a stone was found near the Jeirûn gate stating :—"This church of the blessed John the Baptist was restored by Arcadius, the son of Theodosius."

Arcadius is said not only to have restored the church but to have enlarged it, and Mr. Dickie's report suggests, at all events, the extent of the south wall. On the taking of Damascus by the Saracens in 634 the church was sufficiently large to be divided into two parts, the Moslems taking the eastern half, and the Christians retaining only the western half, both entering, however, by the same great doorway, which still exists, of the Roman temple.[1]

On the accession of Walid, the sixth Khalif of the Omeiyades, the whole edifice was appropriated by the Moslems, and, according to all the Arab authors, pulled down prior to the building of the existing mosque. It was evident that this did not apply to portions of the external wall on the west side and portions of the south wall, viz., the west angle and the central doorway. Mr. Dickie's report shows that the whole of the south wall, including the return at the south-east angle (under the minaret Isa), and the whole of the west wall, including the return at the north-east angle, were retained. So that in fact the pulling down refers to all the covered portions only of the Christian church and the clearance possibly of buildings on the north side ; and the rebuilding of the whole of the mosque proper, viz., the transepts, the triple naves on east and west sides, and the great court at the back with its arcade rounded. Mr. Dickie calls attention to the fact that in the north wall of this arcade "the masonry is patchy, badly coursed, and built of old reused stones, many of the same character as those in the early wall," and that "it has not the character of the south Mohammedan wall, which is

[1] The discovery of the triple gateway measured and drawn by Mr. Dickie is a new one. Porter stated that on each side was a smaller one of similar workmanship, but as he went on to state that they had circular heads, I felt convinced they were niches and not doorways ; Mr. Dickie has discovered doorways under these niches and two other niches lower down between the doorways.

mostly of one style of masonry, finely picked, dressed, and well squared and set."

It is difficult, however, to see how the arcade on north side of the court (which is of the same character and style as that on the north and west sides and the arcades inside dividing the triple naves) could have been built without a back wall, and it is possible that Al Walid employed his Byzantine masons only to build the more conspicuous portions of the mosque.

My best course will probably be to describe, first, briefly the actual buildings and adjuncts commencing with the mosque itself as it existed prior to the fire in 1893.

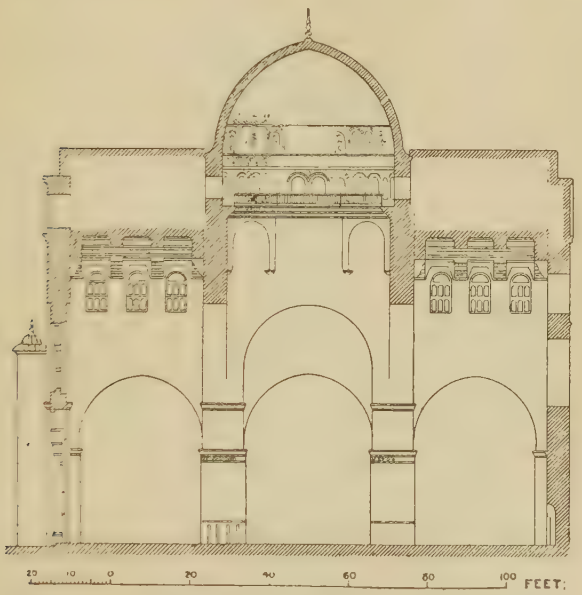


FIG. 1.—NORTH AND SOUTH TRANSEPTS AND CROSSING.

The main building (*see* plan accompanying Mr. Dickie's report) runs east and west, and is built in between two towers at the south-east and south-west corners respectively. It measures internally 446 feet by 123 feet. Exactly in the centre is an immense transept, running north and south, with a dome over the crossing; and on each side, viz., to the east and west respectively, a nave and aisles, or, more correctly speaking, three naves (for the three divisions are of equal dimensions), each nave being 180 feet long. On the north side is a court of the same length as the mosque, and 160 feet from the north transept wall to the rear wall of the arcade which surrounds the court on three sides. The north wall and arcade are not parallel to the mosque, the east wall

and arcade being 10 feet longer than those on the west. The two principal entrances to the court are on the east and west sides, by triple gateways with bronze doors. There is a third entrance on the north side. There are three minarets to the mosque, one on the north side, supposed to be the oldest, and erected by the Khalif al Walid, the builder of the mosque; and two others at the south-east and south-west corners respectively, built on the two towers before referred to. The great piers of the transept measure, exclusive of the casing, 13 feet by 10 feet. They are not, however, equidistant, being 32 feet apart from north to south, and 39 feet 6 inches from east to west. The transverse arches on

FIG. 2.—NORTH FRONT OF MOSQUE, FACING COURT.

the north and south sides of crossing are set back 3 feet 9 inches, so as to obtain above a perfect square of 39 feet 6 inches. The angles of this square are vaulted over with squinch pendentives (Fig. 1), above which runs a gallery, a portion of which is corbelled out. Above this rises the dome with two ranges of windows, one in the drum, the other in the dome. The dome is, I think, of stone, and covered with lead.

The north and south transepts have flat ceilings carried on beams (Fig. 1) supported on corbels, all richly carved, painted in brilliant colours, and gilded. The transept is lighted; by the windows in the dome, by a range of windows in the north and south walls (in the former (Fig. 2) running above the triple arcade which forms the principal entrance to the mosque), and by windows in the east and west walls,

partially, however, blocked up by high-pitched roofs over the nave and aisles (Fig. 3). The nave and aisles, or the triple naves, on the east and west sides of the great transept, are divided by an arcade of 11 bays, with columns taken from some more ancient edifice, raised on pedestals, and surmounted by ancient capitals and by dosserets. The dosseret is of Byzantine origin, and consists of a cubical block placed above the capital to carry a wall of greater thickness than the diameter of the columns. Above the arcades the walls are pierced with semicircular arched openings (Fig. 4). These open out into the side aisles, which are of the same height as the central aisle, the whole device being rendered

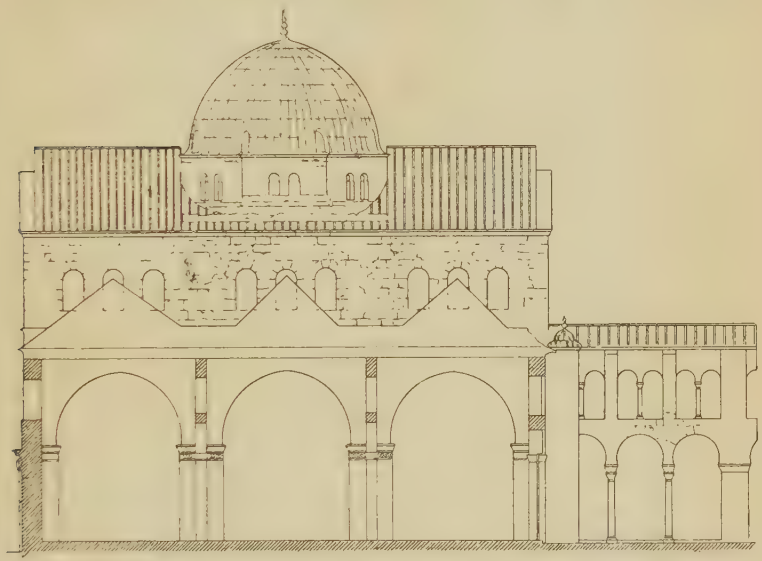


FIG. 3.—SECTION ACROSS THE EAST AISLES, SHOWING EAST WALL OF TRANSEPT.

necessary by the desire to give greater height to the structure than the columns afforded.

The three naves of the eastern and western wings were (probably in the fifteenth century) raised and roofed with high-pitched open timber roofs covered with lead, masking the original windows in the east and west walls of the transept. The destruction by fire of these roofs has revealed the fact that not only were there windows on each side in the north and south transepts, but also in the crossing; and as these windows rise above, and are internally masked by the great arches which carry the central dome, it proves conclusively that the dome and the arches which carry it were afterthoughts, and not at first contemplated. This circumstance, perhaps, also explains the peculiar arrangement of the arches. The transept as built was wider than the central aisle, but as it was deemed necessary to

have a square centre, across the angles of which the squinches were to be thrown, this could only be obtained by setting back the north and south arches. The thickness of the north and south arches carrying the squinch pendentive is 7 feet, whereas that of the east and west is 9 feet, and to this latter dimension must be added the thickness of the original wall, 5 feet, making 14 feet. Mukaddasi, writing in 985 A.D., mentions the dome as if it formed part of the original structure; and, no other Khalif being cited as having added it, we must assume that it was Al Walid's work, but conceived and built by some of the workmen brought over from Byzantium. On the completion of the main building,

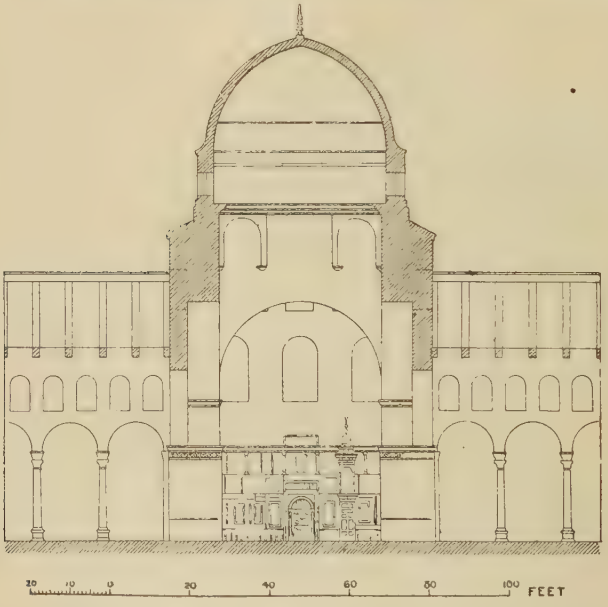


FIG. 4.—SECTION THROUGH NAVE AND CROSSING.

skilled workmen from Persia, Byzantium, and India were employed by Al Walid on the mosaics, which occupied them seven years, and some of the Byzantine workmen might have suggested the erection of a dome for the mosaics, it being a well-known traditional form.

The trusses of the high-pitched open timber roofs above mentioned were placed closer than usual in such roofs, viz., 8 feet 3 inches centre to centre; and as the tie beams measured about 26 inches by 20 inches, not much of the open roof was visible. The four great piers of the transept and the south wall were encased with marbles enriched with arabesque inlays and borders of mosaic up to a height of 20 feet. In the centre of the south wall was the principal mihrâb (Fig. 5), or Mecca niche, and

this was enriched with tier above tier of small arcades of marble with inlays of mother-of-pearl and mosaic, the semidome of the niche being decorated with diagonal cufferings similar to that found in Roman buildings. The inner wall of the north transept still preserves portions of the mosaic decoration of the eighth century, with which all the upper part of the walls and the dome were once covered.

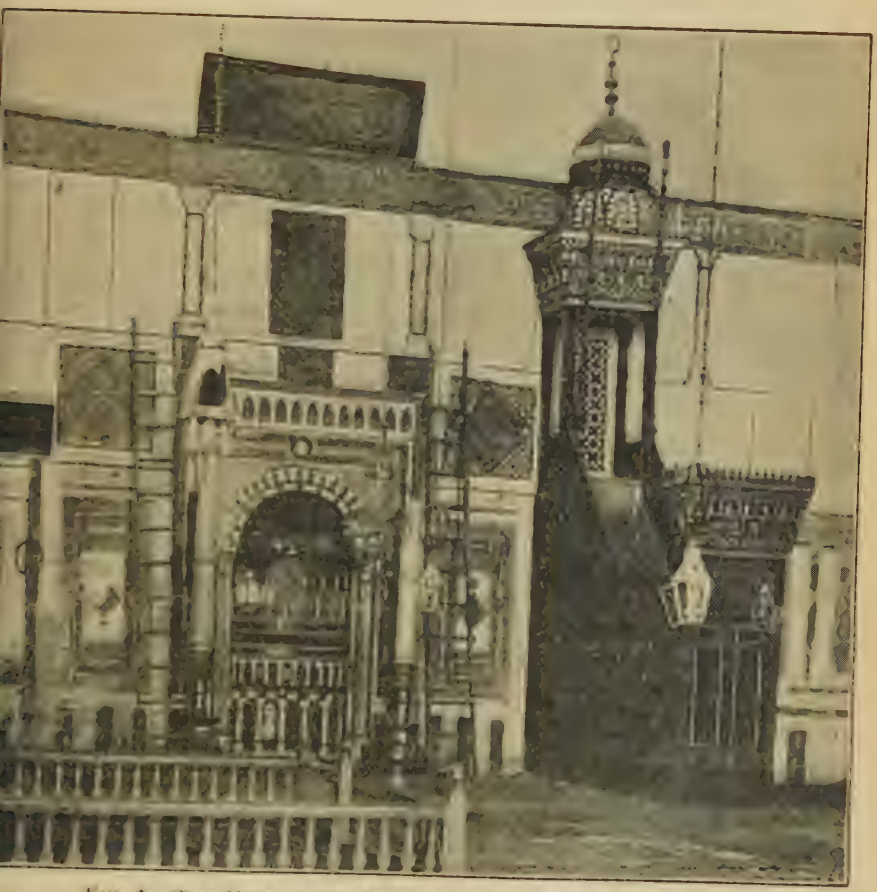


FIG. 5.—THE MIHRAB AND MIMBAR AT SOUTH END OF TRANSEPT.

The two wings of the mosque are lighted by ranges of windows in the north and south walls, of the same size, and occupying almost the same position, as the openings already referred to as over the arcades dividing the three aisles. They, as well as the tympana of the arcades below on the north side, are filled with pierced arabesque designs in stucco filled

with coloured glass. These windows are known in the East as "kamariyas," or "shemsiyas." There are on the north front on each side of the transept eleven arcades corresponding with those of the aisles; they are, however, carried on square piers, and the openings are fitted with framework and doors. It is said that originally these arcades were carried on columns, so that virtually the mosque was open to the court; in other words, that the columns have been encased with masonry.

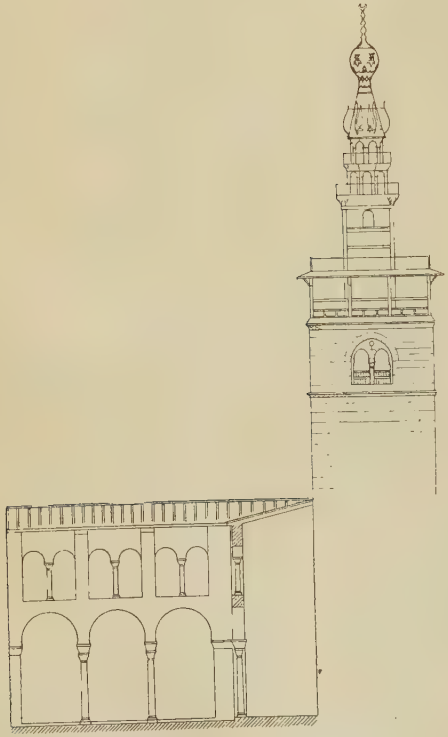


FIG. 6.—ARCADE OF COURT AND MINARET OF THE BRIDE.

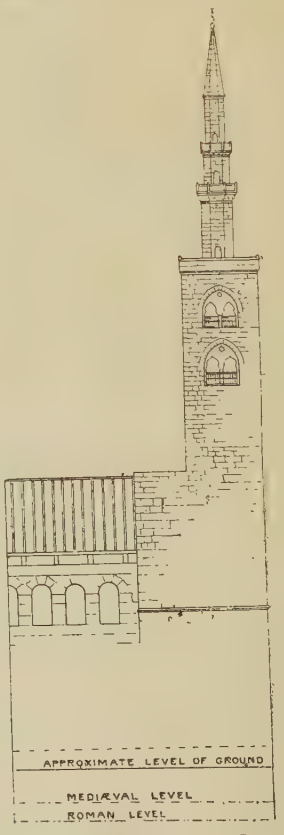


FIG. 7.—THE MINARET OF JESUS.

The great court on the north side is surrounded by a lofty arcade the design of which is similar to the arcades and superstructure within the church, except that the columns are alternated with piers irregularly, there being sometimes three, sometimes two columns between the piers; and in three cases, opposite doorways in rear wall, the piers come together. Instead of the two openings above the arcade (Fig. 2) they

FIG. 8.—VIEW OF THE MOSQUE FROM THE WEST, SHOWING THE NORTH FRONT AND DOME

are coupled together with a shaft in the centre (Fig. 6); but they open into the great portico the roof of which is constructed of beams exposed to view, and painted and decorated. Of the 47 free-standing pillars cited by Ibn-Jubair, 11 have been encased, some, as Mr. Porter states, within the last century. These are all covered with stucco, stamped with arabesque patterns.

Externally, the mosque is of the simplest design: the walls are all built in ashlar masonry, with stone courses 2 feet 9 inches in height;[1] the windows are all circular-headed, with from five to seven voussoirs, according to the size. The transept rises 30 feet above the walls of the two wings, and has a low-pitched gable at the north and south ends, with a single bold ogee moulded cornice. There is a vertical straight joint at each end of the south front, where the mosque was built up against the earlier towers.

In the centre of the transept, and rising above the roof, are two or three courses of stone, which probably carried the original dome built by Al Walid. The existing drum and dome were built probably after the fire of 1400.

The minaret on the north side of the mosque, known as the Mâdinet al 'Arûs (the Minaret of the Bride, Fig. 6), is the most ancient, and is ascribed to Al Walid (705–12), though it has probably been restored since. It is square, with a gallery round the central minaret. The Mâdinet 'Isâ (the Minaret of Jesus, Fig. 7), 250 feet high, stands at the south-eastern angle. This and the Mâdinet el Ghurbiyeh (the Western Minaret) are built on towers of more ancient date, which are said by Ya'kûbî (writing in 891) to have been "originally watch-towers in the Greek days, and belonged to the Church of St. John." The substructure of the western tower, however, is much earlier than this, and is probably the earliest work in Damascus. To this I shall refer again. The minaret which surmounts it is octagonal, and is set back on the north-west angle of the tower.

The principal entrances to the mosque are the triple gateways with bronze doors, on the east and west sides, which lead into the great court. The east gate, known as the Bâb-el-Jeirun, leads to a vestibule with two columns, and was preceded by a lofty arcade with six columns: these are shown in Porter's plan, but they fell down in 1858. The west gate, Bâb-el-Berîd, leads into a vestibule with four columns, and in both cases into the arcade of the great court. There is a north entrance of less importance by the side of the Minaret of the Bride (Fig. 6), and an entrance known as the "Gate of the Addition" at the south-west end of the mosque.

On the south side of the mosque in a line about 10 feet west of the east wall of transept is the axial line of one of those magnificent doorways

[1] The courses of the transept walls are higher than this, but there is no vertical straight joint between transept and naves, and the courses bond in proving that both were erected at the same time.

such as are found in the Roman temples at Baalbec, Palmyra, and other places in Syria. It is on the centre fascia of the architrave of this doorway that the well-known Greek inscription has been carved and which exists to this day notwithstanding the Mohammedan use of the building for twelve centuries, the translation of which is : "Thy kingdom, O Christ, is an everlasting kingdom and Thy dominion endureth throughout all generations."

The existence of niches (thought to be doorways by Porter) was known, but Mr. Dickie's researches have resulted in the discovery of two doorways under these niches (*see* his drawing and description).

At the south-west angle of the south wall is the most ancient building in Damascus. I had thought it to be only a tower, but Dr. Masterman's statement that the pilasters on south side were continued along the west wall (having been exposed since the fire), and Mr. Dickie's discovery of the return of the same on the north front suggests a "porticus" of much greater importance. Mr. Dickie's statement that "the last cap of the third pilaster from the north-west angle returns back through the wall," isolates the porticus and renders it difficult to understand its original destination.

At the south-east angle of the south front, and now, according to Mr. Dickie, along the whole front (except for about 121 feet west to the porticus which has apparently been rebuilt) are the remains of an ancient wall which he considers to be Christian work up to a height of 23 feet above the mosque floor.

In front of the east and west gates there existed a double colonnade, the remains of the latter could still be traced in 1866, built in the shops by the side. The east colonnade was 312 feet long, the west 184 feet. At the west end of the latter there exist the remains of a magnificent portico of four columns, and two responds and angle piers. The columns are, according to Mr. Dickie, 4 feet 9 inches in diameter, and the width is 83 feet 9 inches. The two centre columns are wider apart than the others, and are spanned by an arch round which the entablature is carried, similar to the well-known example of the Palace of Diocletian at Spalato. Half of the pediment above the arch and the springing of the latter still exist.

At the east extremity of the eastern colonnade there existed, according to Arab authors, a similar portico. This was pulled down in 1223, and the materials used to pave the court of the mosque. Mr. Porter found three of the lower portions of the columns; their diameter being 5 feet, would give a length of about 90 feet to this portico.

The principal portion of the paper I read at the Institute of Architects was devoted to proving that the whole of the prayer chamber of the mosque, viz., the transept and the triple nave east and west, and the courtyard on the north side were set out and built by Al Walid in 705. It included extracts from the writings of the mediæval Arab geographers too long to be reproduced here. I propose therefore now only to give a history of the mosque and its restorations.

Of ancient walls Al Walid appears to have utilised the whole of the western porticus with the substructure of the west minaret built probably by the Christians on the south-west angle of the porticus—the whole range of the south wall (including the triple entrance wall of the Roman temple) and the tower at the south-east angle, built, according to Mr. Dickie's discoveries, by the Christians. The two towers are referred to by Yakubi, writing in 891, as having been "originally watch towers in the Greek days, and belonging to the Church of St. John."

The great transept comes exactly in the centre between these two towers, and as the east wall of same blocks up a portion of the great doorway, this was probably walled-up at the same time, and no longer served as an entrance. This transept, really the principal prayer chamber, measured 68 feet wide to outside of walls, and 125 feet north and south, not including the Roman wall. On the east and west Al Walid built the triple naves to a height of 52 feet 6 inches to the wall-plate, and 23 feet above the old Christian wall; as there are no openings in the latter it is not clear how the church was lighted, probably by the clerestory windows of a central nave. As the style and design of the lofty arcade round the court on the north side are similar to the arcades of the naves, Al Walid may be assumed to have built that, as also the lower portion at least of the minaret el Arus on the north side. For the erection of the mosque and court, Christian workmen from Byzantium were employed, and the building and the decoration with marble and mosaic took seven years. Enormous sums of money were spent on it. Twelve hundred artisans were brought over from Byzantium; marble and porphyry were imported from Alexandria and from various towns in Syria, and as Porter says, "in this warlike monarch's days Damascus was the great reservoir for the plunder of nations" (as Rome had already been) "and much of it was devoted to the ornamentation of the mosque, as if the consecration of the booty would atone for the sin of robbery."

The transept as originally built was of low pitch, and ran through level from north to south; the advent probably of the Greek mosaicists suggested the necessity for having a dome, and accordingly, as already detailed, this was contrived in the centre of the great transept. The only remains of this dome, burnt in 1069, may be the three lower courses of stone standing outside the existing dome.

No description is given of this fire, but a comparison of the writings of Mukaddasi in 985 and of Ibn-Jubair in 1184 suggests that a great portion of the marble and mosaic decoration was destroyed, and it is probable that the eastern nave suffered the most, as in their restoration, according to Sir Charles Wilson's notes, "several columns of smaller size have been used, and in some cases they stand on fragments of the original columns." "Many of the Corinthian capitals which have been taken from other buildings are too small for the columns on which they stand." The fire also calcined the face of the masonry of the transept on the east and west sides, necessitating in the restoration the coating of the

whole surface with stucco, which was decorated with frescoes, possibly copied from the mosaic inside representing the sacred towns of Mecca and Medina, and of other places. The greatest change made, however, was in the dome ; the original dome, having been built by Byzantine workmen, was probably in stone. The domes described by Ibn-Jubair (1194) were double, and consisted of an inner and outer dome, both constructed in wood, each built with "forty-eight ribs, which converge above and unite in a centre piece of wood," the upper dome covered with planks of wood and sheets of lead, the lower dome, seen from the interior of the mosque, "inlaid with wooden panels, gilt in the most beautiful manner, and ornamented with colour and carving." The great double dome rested "on a circular base built of mighty blocks, above which rise short and thick pilasters built up of large stones of a very hard kind, and between every two pilasters is pierced a window ; thus the windows extend round the circle under the dome." In addition to this double dome others are described as existing in the north and south transept ; these were probably flat cupolas of a decorative character, formed in the timber ceiling, as there is only a height of 9 or 10 feet between the top of the windows and the soffit of the tie beams of the roof.

The roofs over the east and west triple nave are described by Ibn-Jubair as being flat roofs covered with large sheets of lead, as a matter of fact they were low-pitched roofs, the traces of which Mr. Dickie found in the existing gable ends.

All these roofs and those covering the transept, including the double dome, would appear to have been destroyed in the great fire of 1400. The nave arcades do not seem to have suffered much, with the exception of that part which comes over the tomb of St. John. It is probable that there had always been a decorative structure of some kind over this tomb, which stood between the third and fourth columns of the south side of the eastern naves ; and the capitals of the columns here referred to were Saracenic, of fifteenth century work. In the restoration after the fire of 1400 high pitched roofs in three rows took the place of the low-pitched roofs, and these blocked up the central clerestory windows on each side of north and south transept. A single shell stone dome raised on an octagonal drum (externally) took the place of the original double dome standing within the stone base of three courses, which may be those of the original or the second dome. At the same time, or probably at a later date, a high-pitched roof was built over the north and west transepts.

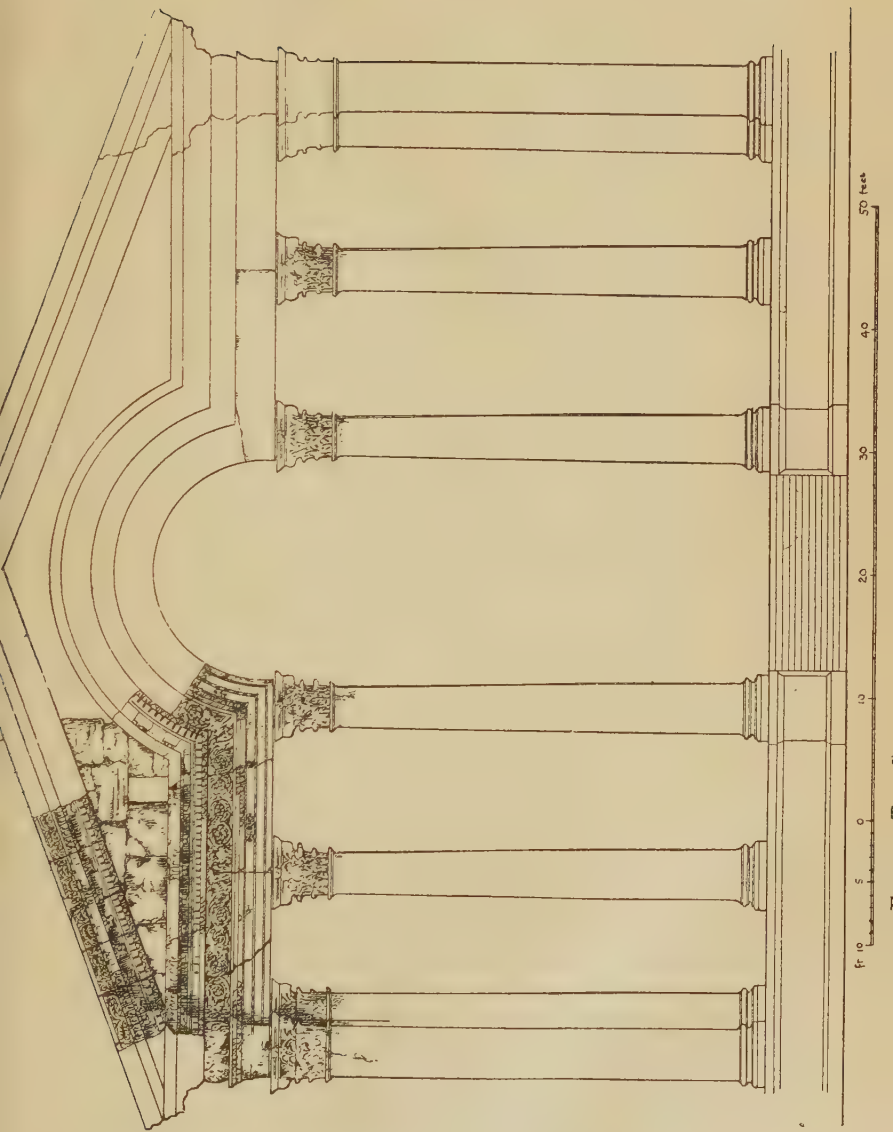
Of the internal decoration of Al Walid's Mosque, Mukaddasi, in 985, gives the clearest description. Ibn-Jubair, writing in 1184, speaks of the mosaic decoration in the past tense, as if the fire of 1069 had destroyed much of it. He says nothing about the marble lining of the walls up to twice the height of a man, described by Mukaddasi, and only describes the four great piers under the dome, which he says, referring to the covering of course, "are made of the most exquisite marble set with coloured stones in mosaic." This description was written in 1184, and the question arises whether any of the marble decoration destroyed in the last fire of

1893 escaped the fires of 1069 and 1400. The lower portion of the mihrab has a Byzantine character about it which would justify its being ascribed to Al Walid's time. The upper portion resembles that of the mihrab of Sultan Kalaoon's Mosque, Cairo (1287), and the columns flanking it on either side are similar to those in the Mosque of Sultan Hasan, Cairo (1361). The decorative marbles on the great piers would seem to belong to the same date,[1] but the panelling on the south wall is probably that of the restoration after the fire of 1400. And this and the magnificent interior might have been carried out by Sultan Kaitbey, of Cairo, 1488, who, according to Mr. Kay, built the south-west minaret of the mosque. Of the mosaic work of Al Walid's time, there existed prior to the fire of 1893 only that found on the inner wall of north transept, and according to Mr. Dickie, there still remains a small portion on the outside of north transept and on the spandrils of the arcades by the west entrance.

The destruction caused by the fire of 1893 was far greater than either in 1069 and 1400, owing, probably, to the immense amount of timber used in the high-pitched roofs. The whole building has been gutted from one end to the other, and only the south-west arcade of the west nave maintained its position and, according to Mr. Dickie, is now standing in a more or less shaky condition. The lower portion of the south wall of the transept and the mihrab still retained the major part of its marble panelling, the shafts and side of the niche being partially calcined. Apparently this has been taken away and stored for future restoration. Judging from the photographs the plaster coating of all the internal walls and the cement or stucco on the east and west walls of transept have preserved the masonry throughout. The work of restoration is proceeding very slowly, probably in some measure owing to the difficulty of obtaining marble shafts for the nave arcades. These are being specially quarried for the mosque, and take much longer to provide than when they could be taken from other buildings. The old columns were too much broken up to be of any service, and these materials, now broken up, are being used to macadamise the roads in and about Damascus, as I am informed by Dr. Masterman.

It now remains to say a few words about the classic remains round the mosque to which Mr. Dickie has devoted his chief interest. The plan which I prepared originally for my Institute paper, and the description which followed being chiefly derived from Porter's work, I have but little to add, except that the accounts given by the Arab geographers throw some light on the avenues of columns which existed at Damascus, and which at Palmyra, Gerasa, Samaria, and other Syrian towns, constitute now the principal ruins of these once populous cities. Apparently

[1] Mr. Kay informs me that the inscription on one of the great piers of the transept states that the restoration and decoration of the Manksurah (the prayer chamber) was effected in the days of the Khalifah al-Muktadi (who reigned 1075–1094).


Ft 10
0
10
20
30
40
50 Feet

nothing now remains of the colonnades on the west side between the Bâb-el-Berîd and the great archway. This great archway, calculated as measuring 84 feet wide, is now, according to Mr. Dickie's measurement, 83 feet 9 inches, but the intercolumniation, as shown in my drawing, is not quite correct, and I had omitted a portion of the pier which was not visible in the photograph from which I made my calculation. Otherwise the design is fairly represented in my drawing, Fig. 9, and as it is the only representation ever made I have thought it worth while reproducing, but its plan must be differentiated with that set out by Mr. Dickie. Mr. Dickie's discovery of the triple gateway on the east side of Porter's eastern archway suggests that a similar gateway existed on the west side of the western archway. The idea which I entertained originally that these archways were the triumphal entrances to palaces lying beyond them is therefore no longer a valid one. Mr. Dickie calls these features propylæa, a term applied generally to the principal entrances of ancient Greek towns, and consisting of a central wide passage for chariots and horses and side passages for foot passengers. At Damascus they appear to have been the central features of the great peristyles on each side of the great court or temenos of the temple. At Palmyra one only of these is found ; on the west side, nearest to the town. The existence of a great portico of columns outside the Palmyra example suggests that similar features existed here. Mr. Dickie could find no trace of any, but the columns being isolated might disappear quicker than the solid walls of a triple gateway, and nothing remained above the capitals of the semi-detached columns flanking the triple gateway to show whether a portico existed or not. Similarly in front of the triple gateway in the south wall of the mosque I think it is probable that a portico existed, such as is found in almost all Syrian and Roman temples.

The most interesting discovery made by Mr. Dickie, however, is the connection of these triple gateways to the east and west of the mosque with an enclosure wall, the temenos of the temple, and which here in Damascus reaches a dimension far beyond that of Palmyra. The continuity of the range of columns enables us to trace out the outer wall with tolerable certainty on all four sides, so that a dimension of 1,000 feet by 1,300, a site equal to about one-fourteenth of the whole area of the city of Damascus, constituted the temenos of the temple of that city. The temenos of Palmyra measures, according to Wood, 730 feet by 710 feet. On the other hand, the principal street at Palmyra, with its double colonnade, is a little more than twice the length of the straight street of Damascus, which ran from gate to gate of the outer walls of the town.

The orientation of the Roman temple at Damascus is still a doubtful point, for although at first it might be assumed that it ran north and south, especially if a portico existed in front of the triple doorway, that is not the usual disposition (except in crowded cities like Rome, where the portico generally faced the Forum). The Temple of the Sun

at Palmyra ran north and south, but the great doorway faced the west, and, moreover, was not in the axis of the western front. The triple doorway, also, is an exceptional feature, so that there is evidently plenty of room for archæological speculations, and the problem is by no means so easy of solution as Mr. Dickie seems to suggest. The pendant to what I have called the "porticus" on the western side—the destination of the piers discovered outside the Bâb-el-Jeirun, and the covering over of the peristyle round the great court, nearly 70 feet wide, to support which not a single column has been discovered, renders still more complex the true solution of the problem.

Extracts from Diary of Captain (*now* Major-General Sir Charles) Wilson, *in* 1865.

December 20th and 21st, 1865.—Making plan and taking photographs of the Mosque at Damascus.

The mosque is on the south side of a large open court, and is divided into three aisles by two rows of columns. In the centre is a transept, having in its middle a small dome supported by four massive piers. The south wall of the mosque is of solid masonry ; the northern is formed by a row of arches carried on square pillars, with the intervening spaces, which were once open to the court, roughly closed. In the eastern part of the mosque is the shrine of St. John, standing, it is said, above a cave in which is the saint's head. In the shrine is a cenotaph covered, in the usual manner, with richly embroidered cloths or shawls. Within the mosque are two fountains and a well. Most of the pedestals of the old columns remain, but in a sadly mutilated state ; and a large number of the original columns are apparently still *in situ*. This is specially the case in the *western half* of the mosque, which is by far the best preserved. In the *eastern half* several columns of smaller size have been used, and in some cases they stand on fragments of the original columns (a shaft 6 feet in circumference stands on the old shaft, which is 7 feet 1½ inches in circumference, and broken off about 2 feet above its base). In the *western half* most of the original capitals remain, but many are so injured that they would appear to have been thrown down and replaced. All these capitals are Corinthian, similar to those of the Kubbet el-Kitab. In the eastern half there is a variety of capitals ; two at the south-east corner are Ionic ; the two enclosed in the shrine of St. John are of late date ; and many of the Corinthian capitals, which have been taken from other buildings, are too small for the columns on which they stand. Above the capitals are architrave blocks of a single stone each, and over these are stones which take the springing of the arches, and are cut to their curve ; thus the arches, which are circular, are carried a little beyond the semi-circle. The western half being under repair, and the plaster and whitewash being scraped off, the character of the masonry could be seen. The principal entrance to the mosque leads from the court to the transept, and is very fine.

Round three sides of the court runs a cloister, the arches of which are semi-circular, and carried on square pillars and columns. The columns have Corinthian capitals and architrave blocks, and above them is a range of smaller arches as in the mosque. In the north-west corner are four capitals, which appear to be Saracenic. There are three main entrances from the city to the court. One in the *east wall* has a porch and three doorways, of which the central door is covered with delicately-worked brass. The Arabic inscriptions are in brass, and in the modern (not Kufic) character. On one of the columns is a mutilated Greek inscription. On the *north side* is a large single doorway, of which the door is similarly ornamented with brass. In the *west wall* is the third entrance, with a large central and two smaller side doorways; the porch is rather deeper than that of the entrance in the east wall. From this doorway a colonnade extends to the remains of the great arch and pediment; the capitals of the colonnade are plastered over, but enough can be seen to show that they are Corinthian. Opening directly into the western half of the mosque, through the south wall, is a fourth large gateway, in front of which a similar colonnade can be traced for some distance. Several capitals and fragments of shafts were lying about in the court; and some of these shafts, as well as some of those in the cloisters, are of granite.

At the eastern end of the court is a small octagonal building, in which clocks are kept, but they had all run down; in the centre of the court is a fountain with four columns on which are Corinthian capitals, and the shafts of two columns used for the illuminations at Bairam. In the north-west corner of the court is the Kubbet el-Kitab, a small domed structure, supported on eight columns with Corinthian capitals; in the dome were said to be fragments of MSS. in Kufic.

On several portions of the mosque, the Kubbet el-Kitab, and the cloisters are large fragments of mosaic work (houses and arabesques), but not nearly equal, either in design or execution, to those in the "Dome of the Rock" at Jerusalem. In some places are patches of faïence work; the designs on the tiles are for the most part identical with those of the tiles in the "Dome of the Rock," but not with those of the best tiles in that building. The marble decoration inside the mosque is similar to that in the Mosque el-Aksa at Jerusalem.

At the north-west corner of the court are two small chambers, in the inner one of which is a Greek inscription. The inscription is on the lintel, and there are nine lines on the inner and five shorter ones on the outer face.

Outside the mosque and near the centre of the south wall there is an old entrance. It consists of a large central gateway and two side ones; the top of the eastern doorway is just visible, and the western one can be seen by looking down a hole in the roof of a chamber. To this chamber there appears to be an entrance from the mosque, but we were not allowed to visit it. The top of the central gateway rises a little above the rubbish; the ornamentation reminded us very much of that of

Baalbek. On the architrave is the Greek inscription, cut on it at a later date; the last word is on a lower line. No trace of this gateway could be seen inside the mosque, but it lies at the east side of the transept, as well as could be ascertained, in the position shown in the plan. At the south-west corner, and along the western end, are traces of older masonry and more classic decoration, of which a photograph was taken (No. 13, Pal. Exp. Fund Series).

A short distance from the mosque, and opposite to the west entrance to the court, are the remains of a large arch and pediment; on the east face the ornament is in tolerably good preservation, but on the west face it is quite obliterated. The style is the same as Baalbek. This also appears to have been a triple gateway.

At the east and west ends of the mosque are several chambers. At the west end one of these opens into a small mosque; at the east end one gives access to the minaret at the south-east angle. There are other minarets at the south-west angle, and in the centre of the north wall of the enclosure.

It is difficult to determine to which buildings the existing remains belong. The gateway in the south wall of the mosque, and the arch and pediment in the bazaar on the west side, apparently belonged to a temple of the age of Baalbek, and not to the church; whilst portions of the southern and western walls of the enclosure seem to be of much older date. A good deal of the church possibly still exists in the mosque, which, from its orientation, appears to have followed the form of the church. The small *mihrabs* are cut out of the solid masonry of the south wall.

Writing to Mr. Spiers Sir Charles Wilson says:—"I find from my diary that on December 23rd I took the plan into the mosque after it had been plotted, and compared it on the ground, correcting a few inaccuracies. The same afternoon a heavy storm of sleet and snow commenced, which lasted, almost without intermission, till the 28th, when we left Damascus. This, probably, accounts for our not completing the plan with the outside wall, minarets, &c.; but I think we were particularly asked to make a plan of the interior, which was then little known."

DISCOVERY OF AN IMPORTANT CUFIC INSCRIPTION NEAR THE CHURCH OF THE HOLY SEPULCHRE, JERUSALEM.

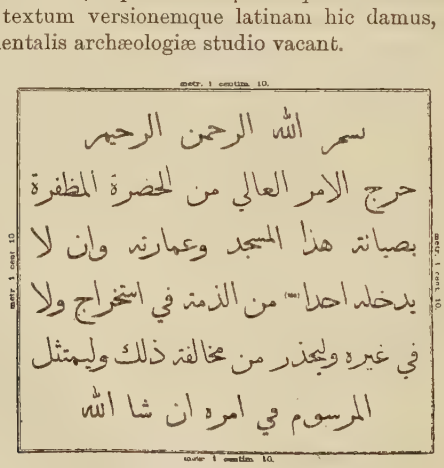
Padre Girolamo Golubowich, O.S.F., Missionario Apostolico, has sent us the following, together with a photograph of the inscription :—

Studiosis Archæologiæ Orientalis.

Communicandum.

Ab *octava statione* Hierosolymitanæ *Viæ Dolorosæ* recedentes, rectoque tramite per Saracenorum forum venalium rerum ad *nonam* versus *stationem* progredientes, immediate post prædictum forum, dextrorsum brevem per gradus ascendimus viam, ubi Christianorum vicus incipit. Inibi igitur, in dextra parte hujus vici, et sub sinistro latere januam secundæ domus ingredientium, *hexahedrus cubicus* prægrandis lapis inventus est (undique habens dimensiones *unius metri et centim.* 10), publiceque detectus fuit die 30 julii currentis anni 1897.

In uno ipsius latere, sequens inscriptio *Cuphicis Characteribus* insculpta legitur, cujus textum versionemque latinam hic damus, in commodum illorum qui orientalis archæologiæ studio vacant.



Versio litteralis.

1. In nomine Dei miserantis et clementis.
2. Exiit sublime decretum (hoc) a Maiestate Victrice [1]
3. ut custodiatur locus orationis iste [2] et reparetur, et ne

[1] Saladinus, ut probabiliter creditur.
[2] Mesquita.

4. ullus ex protectis[1] ingrediatur huc, neque propter tributum (solvendum) neque propter aliud quidquam.
5. Et caveatur ne transgrediatur hoc, et observetur
6. decretum ab Ipsa mandatum. Faxit Deus !

With reference to this inscription M. Clermont-Ganneau writes :—"It appears to me to be of the highest importance in connection with the history of the *Martyrion of Constantine;* it proves that the old wall on the Russian ground east of the Holy Sepulchre is indeed the eastern wall of the Martyrion, and that it had on this side a vestibule and a staircase. I am about to read a memoir on this discovery before the Academy."

A GREEK INSCRIPTION.

By the Rev. H. Porter.

Beirût, *May* 19*th*, 1897.

I enclose a copy of another Greek inscription, which is found in our College Museum here. It is on a neatly-wrought headstone to a grave. The stone is cubical at the base, about 12 inches each way, surmounted by a short pillar. The lettering is very clear, and corresponds to the best type of Greek funeral inscriptions for the early period of the Christian era.

ΔΙΟΔΩΡΕΧΡΗCΤΕ
ΚΑΙΑΩΡΕΕΤΩΝ
ΕΙΚΟCΙΚΑΙΤΡΙΩΝΧΑΙ
ΡΕΖΗΤΕΙΔΕCΕΗΑΤΥ
ΧΗCΟΥΜΗΤΗΡΠΕΝΘΕΙCΕ
ΟΛΟCΟΟΙΚΟC

Διόδωρε, χρηστὲ καὶ ἄωρε, ἐτῶν εἴκοσι
καὶ τριῶν, χαῖρε. Ζητεῖ δέ σε ἡ ἀτυχὴ[ς
σοῦ μήτηρ, πενθεῖ σε ὅλος ὁ οἶκος.

"O Diodorus, good and untimely (taken) at twenty-three years of age, farewell! Thy unhappy mother seeks thee; all the household grieves for thee."

[The expression "thy unhappy mother seeks thee" is doubtless derived from Luke ii, 48, "Thy father and I have sought thee sorrowing," and if so it adds one more to the number of scriptural quotations on the early Christian tombstones.—A. S. M.]

[1] Subditis scilicet Christianis et Judæis.

ON THE REMOVAL OF THE PORTAL OF A CHURCH AT ACRE TO CAIRO.

By the Rev. J. E. Hanauer.

The "Egyptian Gazette" for January 21st, 1897, contained the statement that after the epoch of the Crusades the marble portal of the church at Acre (which church was not specified) was taken down and sent to Cairo, where it was re-erected and may still be seen opposite the Sebeel in the Bazaar.

On reading this statement I thought that I and perhaps, also, some other reader of your valuable periodical would like to know a little more about this portal, and so I wrote to my brother, who lives at Cairo, to be so good as to get a photograph of it for me, and also to find out all he could on the subject. The following is his answer :—

"I have found the portal and forward herewith a rough photo (*see* opposite page). The white line or band running obliquely across the picture is a stream of sunbeams. I hope to send a better photo on my return from Ismailia.

"His Excellency Herz Bey, Chief Architect of the Committee for the Preservation of the Monuments of Arab Art, has kindly furnished the following information, and volunteers to answer any further questions to the best of his ability :—

"'Stanley Lane Poole (Cairo), p. 34, gives an incorrect account, which compare with El Makrisi, p. 382 of vol. ii.

"'The portal was brought over by El Ashraf on Gemadi 17, 690 A.H.

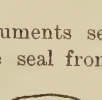
"'En Nasir purchased the portal of the Emir Baidera.'"

As I have not the authors above mentioned, it is not in my power either to verify or compare the references.

NOTES ON THE SEAL FOUND ON OPHEL, THE GREEK INSCRIPTIONS FROM NAZARETH AND KEFR ESH SHEMS, THE SILOAM TEXT, AND THE TOMBS OF THE KINGS.

By Prof. Ch. Clermont-Ganneau, LL.D.

(1) I am obliged by the documents sent to me, especially for the excellent cast of the Israelite seal from Ophel. This cast confirms



The Seal found on Ophel.

Portal of a Church at Acre, now in Cairo.

me in the reading I have proposed for the second name: *Pedayahu*, פדיהו, which is quite biblical,[1] instead of *Paryahu*, which is inexplicable.

(2) The Greek inscription given on p. 188 of the July *Quarterly Statement* had already been published and explained by me in my "Études d'Archéologie Orientale" (vol. ii, October number, 1896, p. 142). It is there pointed out that in the fourth line one must read the name of the famous city of Hippos in the Decapolis, the site of which (*Susieh*) I had before determined near the locality (*Saffûreh*) whence the inscription comes; the true reading is: σοφῆς δ'ἀφ' Ἵππου, "of the wise Hippos," not, as Dr. Murray read, Σοφῆς δ'ἀφίππου, "of Sophè, the horseless." The copy of Dr. Porter enables the first word of the last line to be amended in my previous transcription: ZHCANT' in place of HCANT'.

(3) The inscription on p. 195 should read—

Ευλογητος κ(υριο)ς οτι εισηκουσεν της φωνης της δεησεως μου . κ(υριο)ς βοηθος μου και υπερασπιστης μου, επ'αυτω η δοξα . επυηθη[2] (!) Βην(ι)αμην.

It is composed essentially of passages from the Psalms.

That on p. 194 should read YC ΘΕΟC = εἷς Θεος = "there is only one God."

(4) P. 204. *The Siloam Text.*—The novel and paradoxical theory put forth by Mr. Pilcher, according to which the Hebrew inscription of the Siloam tunnel would date from the epoch of Herod, appears to me to be inadmissible from a palæographic as well as a historical point of view. It rests essentially upon a material observation which, let it be said in passing, I was the first to make (*see* my "Recueil d'Archéologie Orientale," vol. i, p. 295, 1888), but from which one may draw quite different conclusions; it is that the Hebrew text is cut in a *large rectangular cartouche* of which it only occupies hardly the inferior half; above is a large empty space, which was evidently destined to receive something which has never been engraved there. Mr. Pilcher has supposed that this *something* may have been a Greek inscription, but, as I have expressly pointed out, one may suppose, with more probability, that it was, for example, a preamble to the inscription which in its actual state begins very abruptly; or, still better, a *bas relief* in the Egyptian or Assyrian manner, showing the miners at work at the psychological moment, when the two gangs, north and south, met in the middle of the tunnel. This last conjecture would agree well with the two words, otherwise very difficult to explain, with which the inscription begins:—"This is the piercing זה הנקבה, and this is the manner in which it was made" (the explanation follows). These two first words would be in some sort the legend of the scene which one proposed to engrave above the text.

As to the employment of the ancient alphabet of Phœnician origin

[1] 1 Chron. xxvii, 20, Pedaiah. *See* also 2 Kings xxiii, 36; 1 Chron. iii, 18, &c., where the name is spelt פדיה.

[2] ἐπάυησε?

on the money of the Maccabees, it is due to a voluntary archaism, instances of which it will be easy to find in the coinage of other peoples. Would it not, for instance, be rash to conclude from the presence of Gothic characters upon certain English coins of the present day that the Gothic was the alphabet current in England in the nineteenth century? In the case of the Maccabees, moreover, we have perhaps to take another circumstance into consideration. It is this: The Asmoneans who came originally from Modin probably belonged to the northern group of Jews who had remained attached to the ancient Israelite alphabet, as is shown by the survival of this alphabet among the Samaritans. Nothing more natural, then, if they gave the preference to this alphabet upon their money; and thus, on the other part, are explained the palæographic affinities of this alphabet with that of the Samaritans which are so remarkable.

(5) I shall have many and important observations to present upon the question of the Tombs of the Kings raised by a passage in the report of Dr. Bliss (p. 180). I have communicated them to the Academie des Inscriptions et Belles Lettres (of 30th July and 6th and 13th August), in a Memoir which will be published *in extenso* in the next number of my "Revue d'Archéologie Orientale" (§ 66).

THE TEMPLE AND THE MOUNT OF OLIVES.

By William Simpson, Esq.

Mr. Lethaby's communication in the January number of the *Quarterly Statement* reminded me that I have the report of an observation made as far back as 1874 on the relative positions of the Sakhra and the Church of the Ascension. I had asked Sir Walter Besant, who was then Secretary of the Fund, if he could get anyone in Jerusalem to note, either at the vernal or the autumnal equinox, where the sun appeared on the Mount of Olives to a person standing on a line with the Sacred Rock. M. Clermont-Ganneau was then, I believe, acting for the Fund in Palestine, and the communication was sent out to him. Here is his note in reply, which is worth publishing, as it may be of use to those who speculate about the site of the Temple:—

"Je n'etais pas present á Jerusalem . . . . de l'equinoxe d'automne: mais j'ai chargé mon ami M. Bertrand, Chancelier de notre Consulat, de faire à ma place l'observation recommandée. L'observateur placé devant le Sakhra a vu le soleil se levre *á droite* de la mosquée de l'Ascension, au dessus de l'établissement religieux du Pater Nostre: il a calculé que pour voir le soleil se lever au dessus du minaret de la mosquée de l'Ascension il fallait se reporter á environ 60 pas au Nord de la Sakhra."

Observations that might be made in Jerusalem.

Leake and others have touched upon the subject of mountains having been used as gnomons or pointers. And Mr. Norman Lockyer has lately propounded a theory about Egyptian temples being so arranged that they pointed to a spot on the horizon where the sun or some prominent star rose at a particular date.[1] Josephus says that the tabernacle was so placed that the rising sun shone into it.

With ideas of this kind theories spring up, and in the future speculations of this nature are certain to be proposed from time to time about the orientation of the Temple. Now, a few observations, if made in Jerusalem, with regard to the Haram and, say, the Mount of Olives, would be very useful not only as a guide for any theory of orientation that might be applied to the Temple, but at the same time such observations should be of great value as a means of preventing incorrect notions from being adopted.

It would be difficult to make observations from the Sakhra, even if access could at all times be permitted to it, but the position chosen should be one that would be the same as the Holy Rock, as it is the top of Mount Moriah, and the prominent point in the Haram. But observations from any point would be useful, and might be made according to the judgment of the observers.

Observe exactly, say, where the minaret on the Mount of Olives throws its shadow on the Haram platform when the sun becomes visible on the equinoxes and the solstices. Observe on what particular date when the sun rises, that it might shine in a direct line from the minaret—or the highest point of the Mount of Olives—so as to reach the Sakhra—that is supposing the Temple stood on the Sakhra. The days of the important Jewish ceremonies might be observed. Observations of the rising of the moon might also be of interest. There were men who watched the new moon when the Temple existed. Even Orion and the Pleiades might be worth making a note about.

If any other observations suggest themselves, let them be made. Rather err in making many, than doing too few, and perhaps missing some important point.

The observations suggested above are supposed to be made on the assumption that the Temple stood somewhere on, or near, the Sakhra. But the same observations might also be made with reference to the site of the Temple which Mr. Fergusson proposed, *i.e.*, at the south-west corner.

If such observations could be made and laid down on a plan of Jerusalem, they might be of great use for reference.

[1] Stonehenge is now assumed to have been arranged with a pointer to indicate the summer solstice by the sun on rising appearing, as it clears the horizon, on the top of the pointer, which is an erect stone placed outside, and at some distance from, the circle of great stones. The observer in this is supposed to stand on what is known as the Altar Stone.

NOTES ON THE OPHEL SIGNET.

I.—By E. J. Pilcher, Esq.

The Ophel seal recalls the signet of "Haggai ben Shebaniah" in several particulars, and is probably not far removed from it in point of date. The only difficulty in reading the legend arises from the broken condition of the gem. The seal was evidently wrenched from its setting and thrown away, and both ends have consequently been fractured. The first line reads, very plainly, לישמעאל, although the bottom stroke of the first ל has disappeared through the fracture. There is also a mark at the end of the line, which may possibly be the trace of another letter, but which is more likely to be an accidental chip. The first character in the second line has had its top broken off, but it is easy to recognise it as a *nun*, of the same shape as on the Haggai seal. If all the letters on this line be read together as one word, then they give the name Neriah (נריהו), spelt in exactly the same way as in Jeremiah xxxvi, 14. But the usual formula upon these seals is "l —— ben ——"; the word *ben* being frequently divided, the ב being in the upper, and the ן in the lower line. We have, therefore, to restore ב in the upper line of the Ophel seal, and read

לישמעאל בן ריהו = *l-Yishma'e'l ben Ra-yahu.*

The signet of Haggai shows us letters crowded in at the end of a line, and there would be ample room upon the Ophel gem in its original condition for such a letter as ב. In Ezra ii, 47, and three other places, we meet with the name ראיה = Reaiah; and, as the א frequently disappears after *vocal sheva*, ריה or ריהו would be a perfectly legitimate form of this name. The Ophel signet would thus bear two known biblical names, and read "of Ishmael, the son of Reaiah." I add an enlarged drawing of the seal, with the broken parts dotted in.

August 18*th*, 1897.

II.—By Professor A. H. Sayce.

Dr. Neubauer has suggested to me that the first character in the second line of the inscription on the seal recently found by Dr. Bliss at Jerusalem is *nun*, and an inspection of the better impression of it now in England has shown me that he is right. The second name, therefore, is Neriah, for which *see* Jeremiah xxxii, 12. On the new impression I also see traces of a *lamed* both at the beginning and at the end of the first line, so that Dr. Neubauer's further suggestion that ישמע אל is not a proper name, but the phrase, "Let God hear!" must be given up.

September 14*th*, 1897.

[For a note by M. Clermont-Ganneau on this seal *see* p. 304].

10366
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